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Infaunal Macrobenthos and Sediment Characteristics in Bellingham and Samish Bays

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INFAUNAL MACROBENTHOS AND SEDIMENT CHARACTERISTICS IN BELLINGHAM AND SAMISH BAYS

Submitted to
The United States Environmental Protection Agency
Region X

by
Western Washington University

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A project agreement between Western Washington University and Region 10 of the U.S. Environmental Protection Agency signed in September 1983 provided for reports by the University on prior benthic biological investigations in Bellingham and Samish Bays on the infauna contained in 44 Van Veen grab samples.

Sediment samples taken were to be analyzed for organic content as total volatile solids (TVS) and partilce size distribution, and these results coordinated with the data on infaunal benthos.

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PREFACE

A project agreement between Western Washington University (WWU) and Region X of the U. S. Environmental Protection Agency, (EPA) signed in September, 1983, provided for reports by the University on prior benthic biological investigations in Bellingham and Samish Bays and on the infauna contained in 44 Van Veen grab samples. Twenty of these samples had been taken in May of 1983 by EPA personnel. The remaining samples were to be taken by the University as replicates at 12 stations designated by EPA. Sediment samples taken at each station were to be analyzed for organic content as total volatile solids (TVS) and particle size distribution, and these results, along with comparable data from the EPA stations, coordinated with the data on infaunal benthos.

This report integrates the review of prior work and a report of new data collected in 1983.

INTRODUCTION

Benthic macroinvertebrates living in the subtidal zone of Bellingham and Samish Bays are part of a marine ecosystem that is both diverse and productive. This section summarizes knowledge pertaining to subtidal benthic macroinvertebrates and their habitats that has been accumulated over roughly the past 15 years. Included are studies of the physical setting, the distribution and abundance of invertebrates occurring in the area, and the importance of macroinvertebrates to other animals inhabiting the local marine habitat.

Macroinvertebrates are usually defined as all animals retained on a

1 mm mesh sieve. Those living on or in the bottom, the benthos, include a diverse collection of organisms such as polychaete worms, clams, and crustaceans. These are eaten by many larger animals such as fishes and birds. Some invertebrates are harvested and eaten by man. The continued health of the living resources of the sea-bed is greatly desired, but in the study area, man's uses of water and shorelines can and have caused serious degradation of marine benthic communities. Near the City of Bellingham, solid and dissolved wastes are discharged into nearshore marine waters, and the harbor is the terminus of a marine highway serving the City of Bellingham. Conflicts in use have promoted recent efforts to improve water quality and mitigate adverse impacts on the marine ecosystem adjacent to the City of Bellingham.

1. PHYSICAL SETTING

Landforms

Bellingham and Samish Bays are broadly connected embayments situated in the easternmost part of what is popularly called northern Puget Sound (Fig. 1). Bellingham Bay is about 24 km (15 miles) south of the Canadian border and about 200 km (108 miles) from the Pacific Ocean. The two Bays form a kidney-shaped basin about 26 km long and from 5 to 9 km wide. Boundaries for the Bellingham-Samish Bay system as a whole are given by Collias et al. (1966), and are shown on Figure 2. Since the two Bays are poorly separated, the boundary between them is somewhat arbitrary. In this review, Bellingham Bay is defined as the waters north of a line extending from the southern tip of Lummi Island east to Wildcat

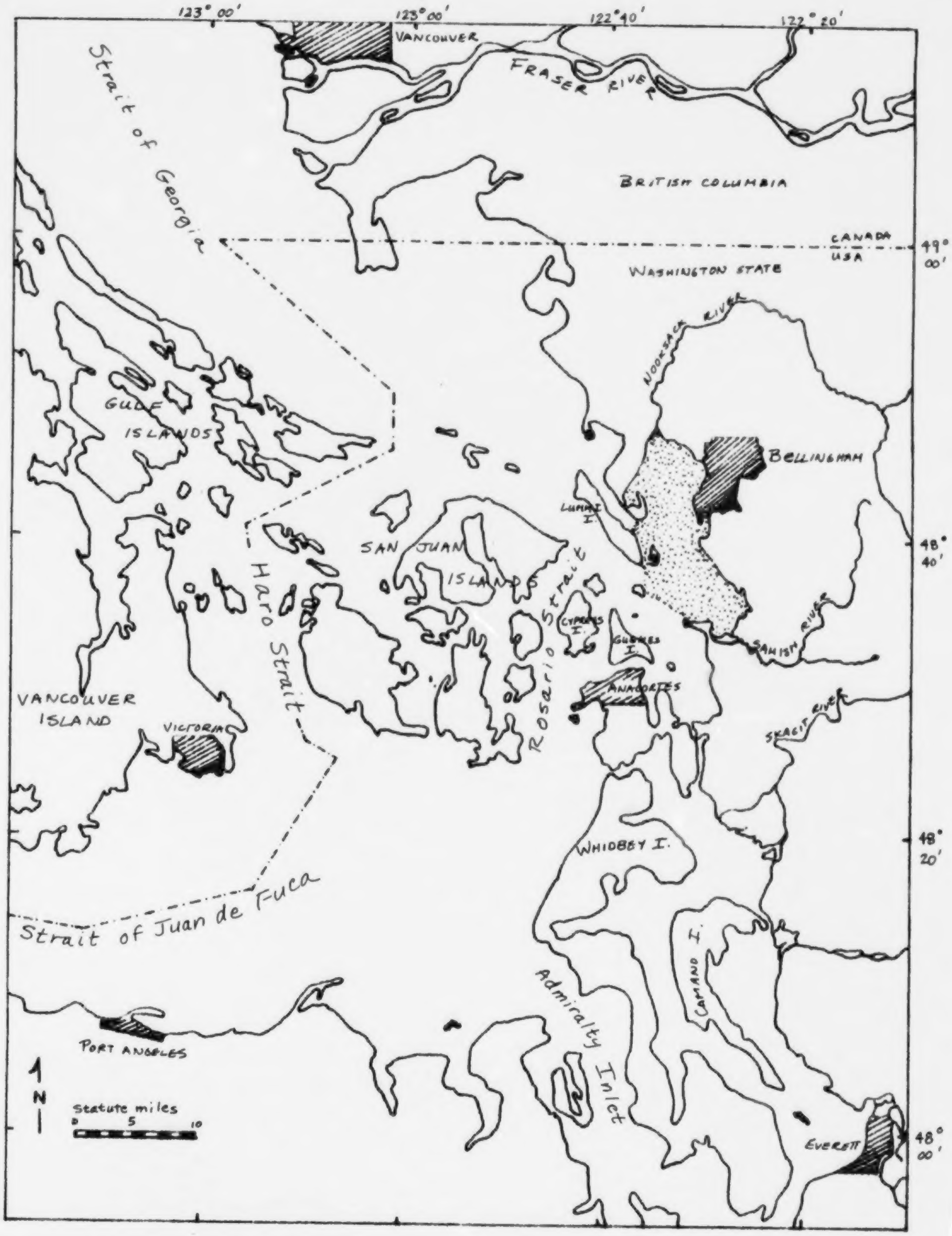


Fig. 1. Location of the Bellingham-Samish Bay system in Western Washington. Waters included in the system are stippled. Map redrawn from Servizi, J. (1969). A study of sediments from Bellingham harbor as related to marine disposal. Fed. Wat. Pollution Control. Admin. Wash. D.C. p. 230.

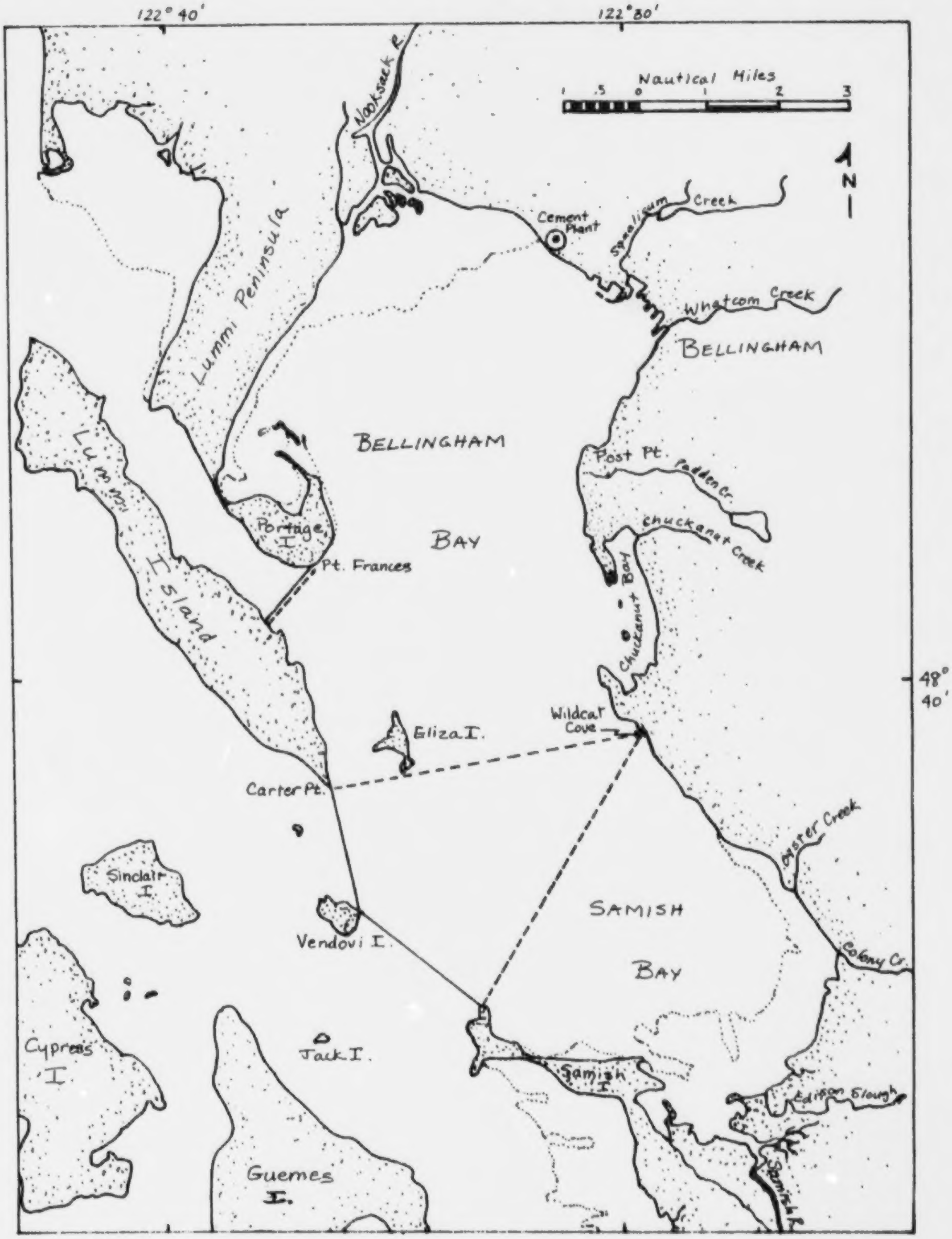


Fig. 2 . Boundaries of Bellingham and Samish Bays. Source: Collias, et al. (1966); Webber (1977). Solid lines are boundaries of the system as a whole, and dashed lines are boundaries of each bay.

Cove (Webber, 1977). Samish Bay includes the waters south and east of a line extending from the northern tip of Point William northeast to Wildcat Cove (Collias, et al., 1966). Bellingham Bay is about 18 km in length and Samish Bay is about 8 km in both length and width.

The waters of Bellingham and Samish Bays are relatively protected. To the northwest, Lummi Island lies between Bellingham Bay and the confluence of the Strait of Georgia and northern Rosario Strait. Samish Bay is connected to Rosario Strait by the passages between Sinclair, Vendovi, Guemes, and Cypress Islands. The San Juan Islands and Vancouver Island lie to the west, separating the Bellingham-Samish Bay system from the open ocean. Along the eastern edge of the Bays, hillsides rise steeply from sea level to over 458 m (1500 ft) (Sternberg, 1967). At the northern and southern ends of the basin, the uplands are low, flat floodplains.

Climate

Prevailing winds are southerly throughout the year, but from November to January, northeast winds are frequent as well. Wind speed averages about 2 to 6 m/sec (7 to 22 km/sec). The strongest winds blow from the southeast from November to January (Shea et al., 1981).

Precipitation averages about 86 cm (34") per year (Corps of Engineers, 1978). The wettest months are from October to April; about three-fourths of the total precipitation falls in this period (Shea et al., 1981; Collias et al., 1966). In the lowlands most precipitation falls as rain, running directly down the rivers and creeks into the bays. Only the Nooksack River drains high mountains. Its discharge, therefore, peaks twice annually, once when precipitation is at a maximum, and again in early summer when snows melt in the mountains.

Shoreline Topography

The shorelines and beaches of the Bays are varied, ranging from steep rock faces to sand and mud flats (Webber, 1977). Along the east and west shorelines, beaches are typically narrow and steeply sloping, consisting of rock outcroppings alternating with pockets of sandy to gravelly sediments. Where bluffs of unconsolidated material front the water, as on the Lummi Peninsula, Portage Island, and Samish Island, beaches are narrow and composed of sandy to gravelly sediments. Intertidal sand and mud flats are found at the heads of both Bays near the points of discharge of the two main rivers of the system.

Near the city of Bellingham, shoreline and tidelands have been modified by dirt fill, riprap, bulkheads, and artificial lagoons. Over 80 hectares of shallow tidelands have been filled (Webber, 1977). In Samish Bay, tidelands are mostly unmodified. However, nearly all of the shoreline at the head of Samish Bay is delimited by dikes, and riprap has been placed on parts of the northeast shoreline along the Burlington-Northern Railway right of way.

Basin Topography

In contrast to the beaches and shorelines, the basin of the Bellingham-Samish Bay system shows little topographic relief. Mean water depth is about 26 m (Shea et al., 1981), but in most of the basin is less than 27 m deep (Corps of Engineers, 1978). The central part of the basin is a gently sloping plain about 20 to 27 m below mean lower low water (MLLW) (Fig. 3). Deeper water is found just off the southeast end of Eliza Island, where there is a short, narrow trench of 82-112 m, and just off Post Point where a small depression is 38 m deep.

Between the 6 and 20 m isobaths the basin rises rapidly to the delta platforms of the Nooksack and Samish Rivers. The Nooksack delta platform is at the northern end of Bellingham Bay, and extends about 2 km south from the river mouth. Since the turn of the century, this delta has prograded seaward nearly 3 km (Sternberg, 1967). The delta of the Samish River is larger than that of the Nooksack, rising nearly 7 km from the river mouth. However, most of this delta was deposited in the distant past when an arm of the Skagit River flowed into Samish Bay. Presently, the delta is not prograding.

Water Characteristics

The sources, physical properties, and circulation patterns of water in the study area have been reviewed in detail by Shea et al. (1981), who incorporate a major oceanographic study by Collias et al. (1966), water quality surveys of inner Bellingham Bay and the area around Post Point (Webber, 1978, CH_2M Hill, 1976), and present new analyses of data available up to 1979. Currents in inner Bellingham Bay defined by Webber (1977) as east of a line between Post Point and the cement plant pier have also been studied (Corps of Engineers, 1977).

Most oceanic water enters Bellingham and Samish Bays at depth through the northern end of Rosario Strait between Lummi, Sinclair, and Vendovi Islands (Fig. 3). The major sill restricting flow in this passage is an average of 42 m deep. Some water also enters through Bellingham Channel, passing over a shallower sill between Guemes, Jack, and Sinclair Islands (Fig. 3). This sill has an average depth of 18 m. Little water flows into or out of Hale Passage; at either end, sills are only about 5 m deep (Shea et al., 1981). Collias et al. (1966) believed that water flows northward along the bottom in Rosario Strait, but Shea et al. (1981), on the basis of more recent current measurements, concluded that net flow in Rosario

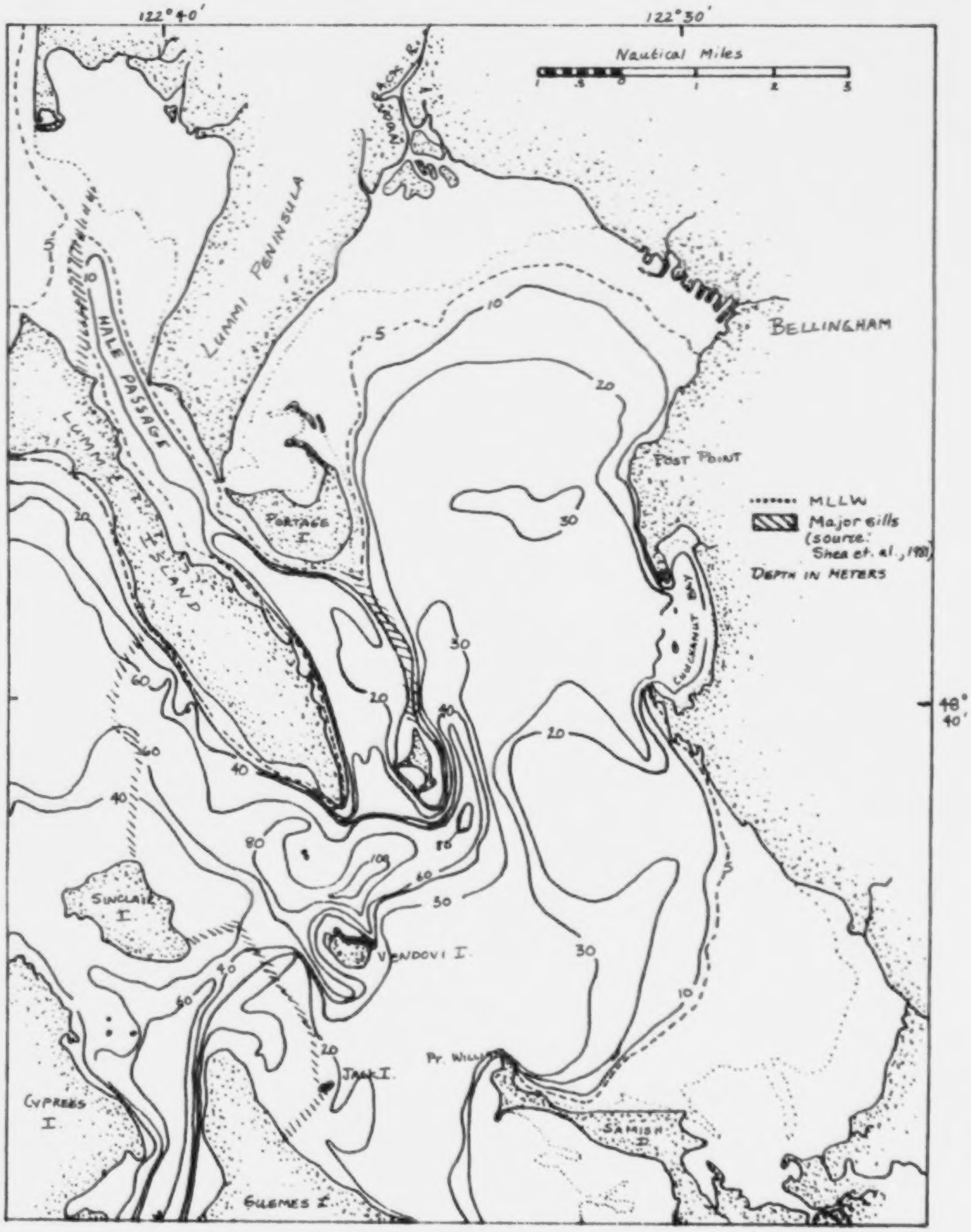


Fig. 3 . Basin topography of the Bellingham-Samish Bay System. Depth contours in meters. Major sills shown as hatched lines. Sources: Collias (1966); Shea, et al. (1981); Sternberg (1967).

Strait is seaward at all depths.

The major source of fresh water in the system is the Nooksack River. Its average flow is about 10 times that of the Samish River and at least 100 times that of any of the five creeks entering the system (Collias et al., 1966).

Over much of the study area, water near the bottom is very similar in character to that in Rosario Strait. Bottom salinity ranges from 29 to 31°/oo, and is fairly stable throughout the year. Temperature varies from about 8 to 13 C. Bottom water is warmest in late summer to early fall, and coolest in winter to spring. Oxygen concentration in water entering from Rosario Strait shows an annual cycle as well, being lowest in summer to early fall and highest in winter (Collias et al., 1966). This has been explained on the basis of oceanic oxygen cycles and stratification in inland waters.

Currents near the bottom are slow (0.1 to 0.2 m/sec). Surface currents are somewhat faster (0.2 to 0.3 m/sec), due to a net outflow of water from the system via the surface layers (Collias et al., 1966; Corps of Engineers, 1977).

In about the top ten meters of the water column of the bays, salinity and temperature vary with depth and over time (Collias et al., 1966; CH_2M Hill, 1976). These changes are primarily the result of fresh water input and seasonal changes in air temperature. Because most fresh water in the system comes from the Nooksack River, brackish water (salinity less than 20°/oo) is most often found and most extensively distributed in the upper part of Bellingham Bay, north of Point Frances and Post Point. Fresh water flows out over the surface of the bay, forming a brackish water layer usually less than 2 m thick. Winds may occasionally deepen the surface layer to as much as 4 m. When mixing due to tides or winds is vigorous, waters may be more or less unstratified except directly off the river mouths. In Samish Bay, surface salinity ranges from 26 to 29°/oo, except in the immediate vicinity of the river mouth. Salinity is lowest in winter when runoff is at a maximum.

Thermal stratification also occurs at times in the water column. Surface water is warmed in summer and cooled in winter to a greater degree than bottom water. The system is isothermal from top to bottom in late fall and early spring, and experiences thermal inversion in winter. These conditions facilitate mixing of surface and bottom waters by tides and wind. In summer from about July to September, high surface temperature allows density stratification that lasts for periods of days to weeks (CH_2M Hill, 1976; unpublished data, STORET System, 1972-1983; unpublished data, Corps of Engineers, 1982-1983). Oxygen concentration in bottom water then decreases. This occurs at a time when oxygen concentration is already lower in the bottom waters than it is at other times of the year. In 1976, dissolved oxygen below 5 m depth was less than 6 mg/l at stations off Post Point, but was above 6 mg/l off Eliza Island (CH_2M Hill, 1976). Summer density stratification and a decrease in dissolved oxygen were seen in Samish Bay as well (Collias et al., 1966). In the inner waterways of the city of Bellingham, dissolved oxygen was often completely depleted at all depths (Webber, 1978). However, this was probably due to oxygen demand created by effluent from industrial and municipal sources, rather than from natural causes. Since 1979, even close to effluent diffusers near the city of Bellingham, oxygen concentration in subsurface waters has rarely dropped below 6 mg/l, the lower limit for Class A waters in the State of Washington (unpublished data, STORET

System, 1972-1983; unpublished data, Corps of Engineers, 1982-1983).

Studies have demonstrated what appears to be complicated circulation determined by wind speed and direction, tidal mixing, and water characteristics (Collias et al., 1966; Corps of Engineers, 1977; Shea, et al., 1981). Most surveys have been conducted in Bellingham Bay rather than Samish Bay, and all have been of very short duration. Three main circulation patterns associated with wind direction have been identified (Shea et al., 1981). When winds are from southerly directions, as is the case during most of the year, fresh water tends to be retained in the upper part of Bellingham Bay. Under these conditions, surface salinity typically ranges between 20 and 26^{o}/oo over much of the upper bay north of Post Point, with isohalines oriented along an east-west axis. Winds from the west or southwest push water to the east, where it then flows down the shoreline past Post Point. The upper water can remain fairly unmixed; under these conditions, salinity of 10 to 20^{o}/oo has been measured at the surface near the city of Bellingham (Collias, et al., 1966). Finally, when winds are from the north or northeast, fresh water flows south along the shores of the Lummi Peninsula, Portage Island, and past the southern end of Lummi Island. When this happens, surface salinity is 15 to 24^{o}/oo on the western shore, but much higher (27 to 29^{o}/oo) on the eastern shore. Thus, water can be intermittently fresh to brackish over much of Bellingham Bay to a depth of about 2 m. From about the 2 to 10 m isobaths, salinity of bottom water may be lowered for short periods of time.

Some effects of tides and stratification on currents near the bottom were demonstrated by studies in the inner bay near the city of Bellingham (Corps of Engineers, 1977). Bottom water in the inner bay flows north on the flood and east and south on the ebb. However, when water is stratified, some bottom water flows in a clockwise eddy in the inner bay rather than flowing south past Post Point.

Sediments

In the subtidal parts of the basin, natural sediments are mostly fine-grained. Over large areas of the basin, sediment texture is uniform. Much of the natural sediment in the basin appears to originate from the system's streams, and particularly from the Nooksack River. Sediment is also eroded from unconsolidated bluffs and rock outcroppings along the shoreline (Webber, 1977). In general, heavier particles are transported along the beaches by longshore drift, while smaller, lighter particles are suspended, settling to the bottom according to gradients in current velocity. Near the river mouths, fine particles may also be trapped by surface layers, settling to the bottom only where water is mixed from top to bottom.

Three major natural sediment types have been described in the subtidal basin: bay muds, delta platform sands, and lag gravels (Sternberg, 1967). In narrow zones of contact between the major types, transitional sediments are found. Bay muds, which are clayey silt, cover nearly all of the basin floors (Fig. 4). In places, the mud contains clay galls as large as 8 mm in diameter. These galls are eroded from clay beds in the slack water channels of the deltas. They are most abundant in the deepest parts of Bellingham Bay, and just seaward of the delta front in Samish Bay (Sternberg, 1967). Shell fragments are found in muddy sediments as well, concentrated just seaward of the delta fronts and adjacent to the shoreline north of Post Point.

Towards the delta fronts, sediments are sandier, grading to a fine, well sorted sand on the delta platforms. Sands in Samish Bay contain more

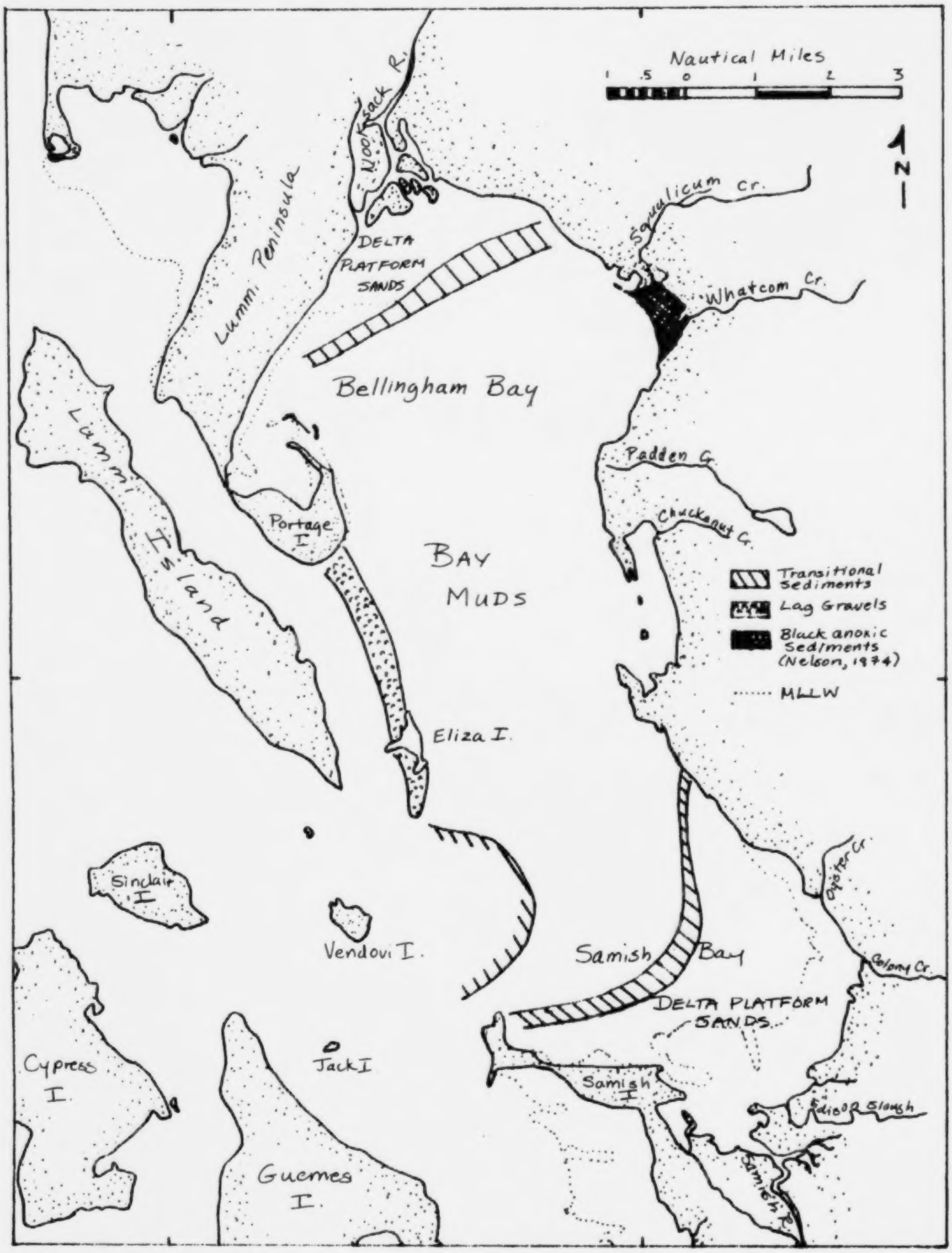


Fig. 4 . Sediment composition in Bellingham and Samish Bays. Natural sediment types, and the distribution of black anoxic sediment in 1974. Sources: Sternberg (1967); Nelson (1974).

mud than those of the Nooksack delta platform (Sternberg, 1967).

Coarse sediments are found subtidally in only a few areas. The sill between Portage and Eliza Islands is composed of coarse gravel, sand, and shell fragments. This type of sediment is also found in the depression off Post Point. In the trench off Eliza Island, sediments are sandy (Webber, 1977).

In inner Bellingham Bay, sediments have been modified by discharge of industrial and municipal waste and by disposal of dredge spoil. Inner bay sediments range from gray mud to black, anaerobic sludge mixed with wood chips and wood fibers (Nelson, 1974). Sludge and wood remains predominate in the vicinity of Whatcom Waterway, and wood chips cover the bottom near old log rafting sites off the northeast and northwest shores of the inner bay. Wood chips are generally gravel-sized (about 5 cm in diameter), while wood fibers either mat on fine sand sieves or pass through to pipette analysis where they behave like clay particles (Nelson, 1974). In the inner bay, organic content in sediment is substantially greater than in open water, especially in the vicinity of Whatcom Waterway. Organic content (as total volatile solids) is 52.0% in Whatcom Waterway (Webber, 1975), decreasing rapidly in other parts of the inner bay where it ranges from 12 to 24% (Nelson, 1974). In the outer bay and Samish Bay, organic content ranges from 5.0 to 11.0% (Webber, 1975).

Sludge and wood fibers were discharged in effluent from the Georgia-Pacific Corporation's pulp mill. Wood chips have been washed into the water when cleaning barges. As well, under log rafts, wood fragments rained down on the bottom. Municipal sewage and solid wastes from industries other than the pulp mill are now collected, given primary treatment, and discharged on the bottom off Post Point. Before 1974, several industries, most of which were food processing plants, discharged untreated effluent into the inner bay. Primary-treated municipal sewage was discharged there also. These industrial and municipal sources combined contributed about one-fifth of the effluent volume of the pulp mill (Shea et al., 1981).

The composition and toxicity of pulp mill effluent has changed in the last ten years (Shea et al., 1981). Prior to 1973, waste streams were discharged directly into the surface waters of the harbor, mostly into Whatcom Waterway. Between 1973 and 1979, a primary clarifier was operated to remove solids from part of the waste. Finally, in 1979, all effluent was routed to a settling and aeration lagoon. Here, fibrous matter and dissolved solids are digested and BOD is reduced substantially. The resulting effluent is discharged on the bottom 2100 m offshore (Fig. 5). In 1979, after startup of the treatment lagoon, about 30% more solids were discharged than in 1978. However, these solids now consist mostly of bacteria rather than pulp fibers, and oxygen demand is about one-fifth of that before treatment (Stanley, 1980).

On the bottom near the pulp mill, sediments were black and anaerobic due to the accumulation of untreated sludge. Black sediments were seen in about the northeastern third of the inner bay (Fig. 4). Sediments were a grey color in the remainder of the inner bay (Nelson, 1974). Sediment color has not been systematically observed since 1974. Sludge probably is no longer accumulating in Whatcom waterway, (Stanley (1980), but the distribution and effect of sludge in the outer bay is unknown at present. Wood chips should no longer be accumulating. Logs are now stored on land, and barging operations have been modified to avoid spilling wood chips (Shea et al., 1981).

Toxic substances are still released in Georgia-Pacific's effluent stream, mostly as dissolved solids. Adsorption onto sediments or direct effects on biota of the inner bay have not been investigated. Substances in sulfite pulp mill effluent that are toxic to marine life include resin acids, lignin degradation products, juvabiones (analogs of insect juvenile hormones), and fungicides. In addition, chlorine from bleach processes, the chlor-alkali plant, and in seawater can form organochlorine compounds and chloramines in the presence of dissolved organics and ammonia, respectively (Shea et al., 1981).

From 1965 to 1973, between 10 and 20 tons of mercury were discharged from the pulp mill's chlor-alkali plant (Nelson, 1974). A recovery system was installed in 1973, and discharges have since been well below standards set by the Federal Government. Mercury from past discharges still persists in sediments, decreasing rapidly with distance from the source at the lagoon of the chlor-alkali plant (Nelson, 1974; Stanley, 1980). From 1974 to 1979, mercury concentration in the sediment decreased in most parts of Whatcom Waterway to about one-tenth to one-half of initial levels (Table 1). The decrease was generally less than expected given a reported half-life of mercury in marine sediments of 1.3 years (Nelson, 1974). Between 1979 and 1980, little change occured in sediment mercury levels (Stanley, 1980).

Sludge, wood chips, and other solid waste remain in the inner bay and have been periodically redistributed by dredging and open water disposal. City waterways are subject to continuous siltation and need to be dredged about every 10 years (Corps of Engineers, 1978). Since 1966, a total of 684,680 m^3 of dredged material has been deposited at three disposal sites designated by the Department of Natural Resources (Fig. 5). Dredged material was dumped at these sites as shown in Table 2 (F. Hansen, pers. comm., 1983). Most dredged sediment is probably from the Nooksack River, which carries a sediment load of about 688,500 m^3/yr. However, in Whatcom Waterway before 1979, pulp mill sludge accounted for some of the material removed by dredging (Shea et al., 1981). Sediment from Whatcom Waterway was dumped north of Post Point in 1966 (Site A, Fig. 5) and near Starr Rock in 1969 (Site B, Fig. 5). Dredged material is probably redistributed from the open water disposal sites by currents. Goodwin (1972) evaluated the 1969 disposal area and decided that fibrous matter and debris covered much of the area in the inner harbor. Whatcom Waterway was dredged again in 1974, but these spoils, which were heavily contaminated with mercury, were placed in an upland disposal site (Nelson, 1974). The newest disposal site (Site C, Fig. 5) has received 456,710 m^3 of dredge spoil, most of which was granular material from Squalicum Waterway and from construction projects (Table 2).

Table 1. Mercury in the sediments of Whatcom Waterway in 1974, 1979, and 1980.

Locations in Whatcom Waterway	Mercury in sediment by year, ppm (dry weight)		
	1974[a]	1979[b]	1980[b]
Inner Reach	0.85 ±0.13 (2)	2.32 ± 3.27 (3)	0.63 (1)
Middle Reach	10.78 ±0.18 (2)	2.60 ± 0.42 (2)	2.30 (1)
Chlor-alkali lagoon	58.00 ±14.1 (2)	32.00 ± 7.07 (2)	32.00 (1)
Outer Reach	3.57 ± 0.81 (2)	0.33 (1)	1.20 (1)

[a] Data are from Nelson et al. (1974), Appendix II. Inner = Station 1, Middle = Station 2, Lagoon = Station 3, and Outer = Station 5. Station locations are shown on Figure 14 (p. 37) of Nelson's report.

[b] Data are from Stanley (1980), Table 25. Inner = Stations 1 and 2, Middle = Station 3, Lagoon = Station A, and Outer = Station 4. Station locations are shown on Figure 3 (p. 15) of Stanley's report.

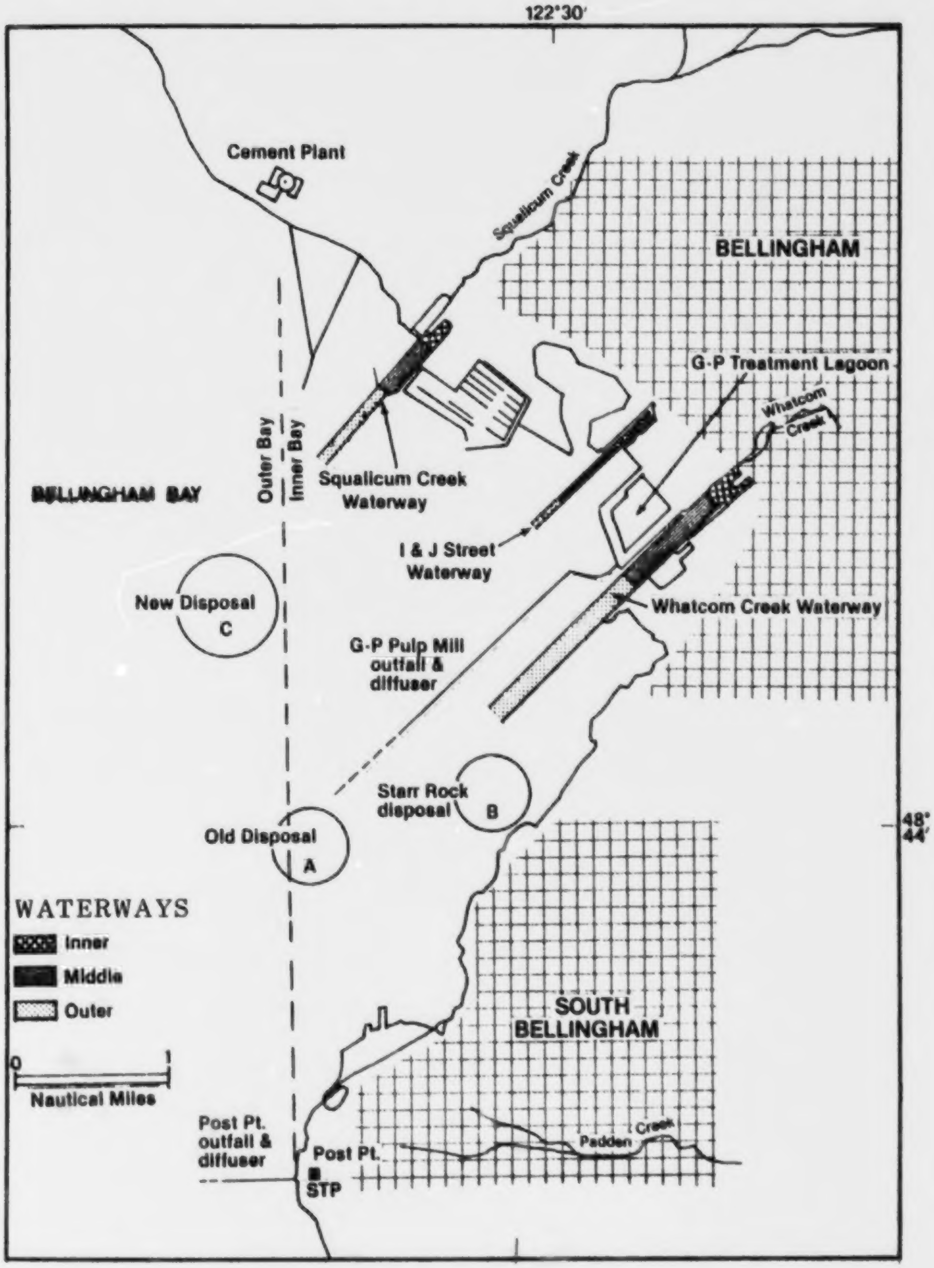


Fig. 5 . Solid waste disposal areas in Bellingham Bay. Present effluent outfalls and dredge spoil disposal sites used from 1966 to the present.

Table 2. Dredging in Bellingham Harbor since 1966. Source, amount removed, and disposal site.

Date	Amount dredged (m^3)	Source	Disposal Site
1966	129,285	All waterways	Outer bay
1969	99,450	Whatcom waterway	Starr Rock
Mar 1977	1,530		Starr Rock
Jun 1978	183,600	Dike for Georgia-Pacific treatment lagoon: between Whatcom and I&J waterways	New Disposal
1979	173,072	Squalicum waterway	New Disposal
Sep 1979	2,521	S. Bellingham: public launch	New Disposal
Nov 1979	6,864	Near Squalicum waterway	New Disposal
Jan 1982	68,850	Cement plant pier	New Disposal
May 1982	2,295	Near I&J waterway	New Disposal
May 1982	17,213	S. Bellingham: floating drydock	New Disposal
Mar 1983	2,295	Squalicum waterway	New Disposal

BENTHIC MACROINVERTEBRATES

Five major studies of macrobenthos have been conducted within the Bellingham - Samish Bay area. Sampling methods, locations of samples, and number of replicates taken are shown on Table 3. All five studies were reviewed by Shea, et al. (1981) who compiled a composite species list for Bellingham Bay.

Available information on macroinvertebrates is mostly from inner Bellingham Bay. In outer Bellingham Bay, studies have largely covered areas close to shore. There are few quantitative data from Samish Bay. All quantitative studies were done before 1979, the year Georgia-Pacific began secondary treatment of its effluent. However, benthos were qualitatively surveyed in 1980 (Stanley, 1980).

A new composite species list was compiled from published reports, reviews, raw data in unpublished reports of CH_2M Hill to the City of Bellingham for 1974-1975, and from unpublished raw data of the 1976 subtidal study of Smith (1979). A total of 172 macroinvertebrate species was recorded from 1974 to 1977 in subtidal core or grab samples from the study area (Table 4). Eleven phyla were represented. Most of the species were polychaete worms, bivalve molluscs, crustaceans, or echinoderms, a faunistic assemblage typical of most shallow water, temperate benthic communities. An additional 69 invertebrate species were noted from otter trawls or beach seines where the primary purpose was to sample fish populations (Table 5). Most of these invertebrates were large and mobile animals that are poorly sampled in grabs or cores. Species charactersitic of soft sediments of the subtidal zone, as opposed to intertidal habitats, are so indicated (Table 5).

Table 3. Subtidal benthic surveys in Bellingham and Samish Bays.
Date, Sampling methods, and number of samples taken.

Source of Information	Dates	Sampling method	Location	Number of samples
Shea, et.al., 1981 CH_2M Hill, unpublished quarterly reports CH_2M Hill, 1976	Oct 1973-Aug 1975	Van Veen grab	Near Post Point Sewage Treatment Plant outfall	90^a
Nelson, 1974	Aug 1974	Peterson grab Identified to 1mm	Near Georgia-Pacific's Chlor-alkali plant	87
			Control stations in outer Bellingham and Samish Bays	12
Webber, 1975	Oct 1974-Mar 1975	Otter trawls - 1" mesh for fish and invertebrates.	Bellingham Bay: 8 stations sampled monthly	96^b
Smith, 1979; unpublished data	Mar 1976& Sep 1976	SCUBA-operated airlift Identified to 2mm	Portage I, Eliza I, Samish Bay	27
Webber, 1978	May/Jun, Sep/Oct 1977;	$0.05m^2$ subsamples of Van Veen grabs Identified to 1mm	Waterways of the city of Bellingham	54
			Old disposal:near Starr Rk.	6
			Boulevard: near Post Point	6
	Jan, Mar/Apr 1978	Van Veen grab Identified to 1mm	Mt. Baker Plywood:near Squalicum Waterway	6
			Roeder Ave.:near Squalicum Waterway	6
			New disposal	3
			Bay control	3

a - Species data available only in quarterly reports, and represent 44 samples taken at 8 stations in Feb & Oct 1974; Feb, May, & Aug 1975.
Total abundance by station available for all dates except Aug 1975(Shea et.al. (1981)

b - Data listed monthly for dungeness crabs and 3 shrimp species; other invertebrates included in a total species list for otter trawls and beach surveys.

c - Species data available in unpublished raw data; totals by major taxonomic group published in report.

Table 4. Macroinvertebrate species occurring in quantitative grab samples in Bellingham and Samish Bays. Sources of information are as follows: Bellingham Bay Inner waterways: "Inner" stations of Webber, 1978; Inner bay (exclusive of waterways): Webber, 1978; Nelson, 1974.; Outer Bellingham Bay, Deep: CH$_2$M Hill 1974-1975, unpublished quarterly reports, depth range: 20-34m; Outer Bellingham Bay, Shallow: unpublished data for Eliza I., and Portage I., depth range 3-16 m; Samish Bay, Shallow: unpublished data for Samish Bay, depth range 4-16 m.

Invertebrate taxon	Inner Bellingham Bay		Outer Bellingham Bay		Samish Bay
	Inner waterways	Inner Bay	Deep	Shallow	Shallow
Cnidaria					
Hydrozoa					x
Aglaophenia sp.			x	x	
Pennatulaceae					
Virgularia sp.			x	x	
Actinaria					
Epiactis prolifera					x
Platyhelminthes		x		x	x
Nemertea		x		x	x
Nematoda		x			
Annelida					
Polychaeta					
Ammotrypane aulogaster				x	

Table 4 (Continued).

Invertebrate taxon	Inner Bellingham Bay: Inner waterways	Inner Bellingham Bay: Inner Bay	Outer Bellingham Bay: Deep	Outer Bellingham Bay: Shallow	Samish Bay: Shallow
Annelida: Polychaeta (continued)					
Ampharetidae			x		
Ampharete arctica		x		x	x
Amphisamytha sp.					
Arenicola sp.			x		
Armandia brevis		x		x	x
Asychis similis		x			
Axiothella rubrocincta		x	x	x	x
Capitella capitata	x	x	x	x	x
Caulleriella sp.	x	x	x		
Chaetozone setosa/spp.	x				x
Chone sp.		x			
Cirratulus cirratus		x		x	x
Ctenodrilus sp.					
Disoma franciscanum				x	x
Dorvillea spp.	x	x	x	x	x
Eteone spp.		x		x	
Eudistylia vancouveri		x			
Eulalia sp.		x		x	x
Eunice kobiensis		x			
Exogone sp.				x	x
Flabelligera affinis					x
Glycera sp.			x	x	x
Glycinde sp.	x	x	x	x	x
Haploscoloplos elongata				x	x
Hesionidae (Gyptis, Ophiodromus, Micropodarke)		x		x	x
Hemipodus borealis		x	x	x	
Heteromastus filobranchus	x	x			
Laetmonice pellucida		x			
Laonice cirrata				x	x
Lumbrineris spp.		x	x	x	x
Magelona pitelkai				x	

Table 4 (Continued).

Invertebrate taxon	Inner Bellingham Bay		Outer Bellingham Bay		Samish Bay
	Inner waterways	Inner Bay	Deep	Shallow	Shallow
Annelida: Polychaeta (continued)					
Malacoceros glutaeus				x	x
Maldanidae		x		x	x
Maldane glebiflex		x	x	x	x
M. sarsi		x		x	
Mediomastus sp.		x		x	x
Melinna cristata		x			
Myxicola sp.		x			
Nephtys caecoides		x			x
N. cornuta		x	x		
N. ferruginea				x	
N. longosetosa		x		x	x
Nereis/Neanthes spp.		x	x	x	
Notomastus giganteus		x			
N. tenuis		x	x	x	x
Onuphis sp./Nothria elegans		x		x	x
Ophelia sp.			x		
Owenia fusiformis	x	x	x	x	x
Paraonis sp.				x	x
Paraonella sp.	x			x	
Pectinaria/Cistenides spp.		x		x	
Pherusa plumosa			x		
Pholoe minuta		x		x	x
Phyllodoce spp.		x		x	
Pista sp.				x	x
Pilargis berkeleyae				x	
Platynereis bicanaliculata				x	x
Polycirrus sp.				x	
Polydora sp.		x		x	
Polynoidae (Halosydna, Harmothoe, Polyeunoa)	x	x			x
Praxillella sp.		x		x	x
Protodorvillea gracilis		x			

Table 4 (Continued).

Invertebrate taxon	Inner Bellingham Bay		Outer Bellingham Bay		Samish Bay
	Inner waterways	Inner Bay	Deep	Shallow	Shallow
Annelida: Polychaeta (continued)					
Prionospio pinnata/cirrifera					x
P. steenstrupi	x	x		x	
Pseudopolydora kempi japonica		x			
Sabellidae					x
Sabellaria cementarium			x		
Scalibregma inflatum	x	x	x	x	x
Scoloplos armiger				x	
Sphaerodoropsis sphaerulifer		x			
Spio sp.					x
Spiophanes sp.		x		x	x
Sternaspis scutata (=fossor)			x	x	
Sthenelais tertiaglabra					x
Terebellidae	x	x		x	
Terebellides stroemi		x		x	x
Tharyx sp.	x	x			
Thelepus sp.			x		
Archiannelida					
Saccocirrus sp.				x	
Oligochaeta		x		x	x
Priapulida					
Priapulus caudatus		x		x	
Sipuncula				x	
Phoronida		x		x	

Table 4 (Continued).

Invertebrate taxon	Inner Bellingham Bay		Outer Bellingham Bay		Samish Bay
	Inner waterways	Inner Bay	Deep	Shallow	Shallow
Mollusca					
Prosobranchia					
Alvinia sp.				x	
Amphissa sp.			x		
Bittium sp.					x
Lacuna sp.				x	x
Margarites pupillus					
Mitrella sp.		x		x	x
Nassarius mendicus				x	
Opisthobranchia					
Acteocina sp.			x		
Aglaja diomedea	x	x			
Eubranchus sp.					x
Phyllaplysia taylori					x
Odostomia sp.					x
Turbonilla sp.			x		
Bivalvia					
Acila castrensis				x	x
Axinopsida serricata	x	x	x	x	x
Clinocardium sp.		x	x	x	x
Cryptomya californica					x
Cyclocardia sp.		x			
Glycymeris subobsoleta			x		
Lucinoma tenuisculpta				x	
Lyonsia californica/sp.			x	x	
Macoma balthica		x	x	x	
M. inconspicua (=obliqua)			x	x	x
M. inquinata	x		x		x
M. nasuta	x	x	x	x	x
M. secta		x	x		

Table 4 (Continued).

Invertebrate taxon	Inner Bellingham Bay		Outer Bellingham Bay		Samish Bay
	Inner waterways	Inner Bay	Deep	Shallow	Shallow
Mollusca: Bivalvia (continued)					
Musculus laevigatus		x			
Mercenaria sp.			x		
Mya arenaria		x		x	
Mysella tumida	x	x	x	x	x
Mytilus edulis	x			x	
Nucula tenuis/sp.		x	x	x	x
Nuculana hamata		x		x	x
N. minuta			x	x	
Protothaca staminea		x		x	
Psephidia lordi		x		x	x
Saxidomus giganteus		x		x	
Solen sicarius			x	x	x
Tellina sp.	x			x	
Ventricolaria sp.			x		
Yoldia limatula	x	x		x	x
Y. scissurata		x			
Y. thracaeformis		x			
Y. sp.			x		
Scaphopoda					
Dentalium sp.			x	x	
Arthropoda: Crustacea					
Cirripedia					
Balanus glandula/crenatus	x	x		x	
Leptostraca					
Nebalia pugettensis				x	x

Table 4 (Continued).

Invertebrate taxon	Inner Bellingham Bay		Outer Bellingham Bay		Samish Bay
	Inner waterways	Inner Bay	Deep	Shallow	Shallow
Crustacea (continued)					
Cumacea					
Colurostylis sp.			x	x	
Diastylis sp.		x			
Eudorella sp.		x			x
Leptostylis sp.		x			
Oxyurostylis sp.		x			x
Tanaidacea					
Anatanais normani		x		x	
Leptochelia sp.		x		x	x
Isopoda					
Idotea spp.		x		x	x
Synidotea spp.		x		x	x
Gnorimosphaeroma oregonensis	x				
Amphipoda					
Gammaridea	x	x	x	x	x
Caprellidea				x	x
Decapoda					
Cancer magister			x		
C. oregonensis				x	
Crangon sp.				x	
Hemigrapsus oregonensis	x				
Heptacarpus brevirostris				x	
Oregonia gracilis			x	x	
Pagurus sp.				x	
Pinnixa occidentalis/sp.		x	x	x	x

Table 4 (Continued).

Invertebrate taxon	Inner Bellingham Bay		Outer Bellingham Bay		Samish Bay
	Inner waterways	Inner Bay	Deep	Shallow	Shallow
Crustacea:Decapoda (continued)					
Pugettia gracilis/sp.			x	x	
Spirontocaris prionota/sp.			x		x
Telmessus cheiragonus			x	x	x
Pycnogonida					x
Echinodermata					
Asteroidea					
Leptasterias hexactis					x
Pisaster brevispinus				x	
Echinoidea					
Dendraster excentricus				x	
Strongylocentrotus droebachiensis					x
Holothuroidea					
Cucumaria piperata		x		x	x
Eupentacta quinquesemita			x	x	x
Leptosynapta sp.				x	x
Molpadia intermedia			x		
Ophiuroidea	x	x	x	x	x
Amphiodia occidentalis	x	x	x	x	
Ophiura sarsi			x		

Table 5. Macroinvertebrate species caught in Bellingham Bay beach surveys and otter trawls , April 1974 - March 1975, but not in subsequent core or grab samples. The predominant habitat of each species is coded as follows:
R: nearshore rock/cobble
S: subtidal soft sediment
P: planktonic or nektonic(inhabiting the water column)
I: intertidal soft sediment
X: parasite
blank: habitat not identified

Invertebrate taxon	Habitat
Cnidaria	
Actinaria	
Anthopleura xanthogrammica	R
Metridium Senile	R
Tealia crassicornis	R
Pennatulaceae	
Ptilosarcus gurneyi	S
Ctenophora	P
Mollusca	
Amphineura	
Tonicella lineata	R
Prosobranchia	
Acmaea sp.	R
Calliostoma sp.	R
Calyptraea fastigiata	R
Collisella digitalis	R
Colus sp.	
Crepidula sp.	R
Hipponix sp.	
Littorina scutulata	R
L. sitkana	R
Notoacmaea scutum	R
Polinices lewisii	I/S
Thais lamellosa	R
Trichotropis cancellata	R
Opisthobranchia	
Anisodoris nobilis	
Armina californica	S

Table 5 (Continued)

Invertebrate taxon	Habitat
Mollusca: Opisthobranchia (continued)	
Dendronotus sp.	
Diaulula sandiegensis	
Doridacea	
Hermissenda crassicornis	I/R
Tritonia sp.	S
Cylichna sp.	S
Odostomia sp.	S
Gastropteron sp.	P/I
Bivalvia	
Cardiomya californica	S
Cardita ventricosa	S
Chlamys hericius	
Compsomyax subdiaphana	S
Liocyma scammoni	S
Macoma yoldiformis	S
Pandora filosa	S
P. grandis	S
Pecten caurinus	
Pododesmus cepio	R
Cephalopoda	
Octopus dofleini	R
Rossia pacifica	R
Arthropoda: Crustacea	
Cirripedia	
Balanus glandula	R
Rhizocephala	X
Mysidacea	
Archaeomysis grebnitzkii	P/S
Decapoda	
Callianassa sp.	S
Cancer oregonensis	R
C. productus	R
Chionoecetes bairdi	R
Hippolyte clarki	P/S
Hyas lyratus	R
Lophopanopeus bellus	R
Pandalus sp.	P/S
Paracrangon echinata	P/S

Table 5 (Continued)

Invertebrate taxon	Habitat
Crustacea:Decapoda (continued)	
Petrolisthes cinctipes	R
Spirontocaris paludicola	P/S
S. picta	P/S
Echinodermata	
Asteroidea	
Crossaster papposus	S
Dermasterias imbricata	S
Luidia foliolota	S
Pisaster ochraceus	R
Pycnopodia helianthoided	S
Solaster stimpsoni	S
Holothuroidea	
Cucmaria miniata	R
Parastichopus californicus	R/s
Chordata	
Ascidiacea	
Ascidea paratropa	R
Boltenia villosa	R
Corella willmeriana	R
Pyura haustor	R
Ascideacea spp.	R/S

Because quantitative studies were done in different locations and differed in both objectives and methods, most results are not strictly comparable. Accordingly, the results and conclusions of each study will be discussed, followed by a general description of macrobenthic communities in Bellingham and Samish Bays.

Nelson (1974), in a study of mercury concentration in the benthos of Bellingham Bay, described four major benthic invertebrate assemblages in the inner part of the Bay. The innermost waterways of the City of Bellingham, 1 to 7 m deep, were dominated by the polychaete worm Capitella capitata. In waters adjacent to Whatcom Waterway (about 10 m deep), the polychaetes Capitella and Terebellides, the clam Macoma, and the snail Mitrella were dominant. Off Squalicum Harbor and towards the Nooksack River, dominant species were the tube-building polychaetes Owenia fusiformis and members of the family Maldanidae, the ophiuroid Amphiodia, and the small pinnotherid crab Pinnixa. These stations were about 12 m deep. North and west of Post Point within the inner bay, at about 12-15 m, dominant animals were polychaetes of the family Maldanidae and genus Glycinde, the clams Axinopsida and Yoldia, and the ophiuroid Amphiodia.

No satisfactory "indicator" species could be selected for analysis of mercury in tissues because no species was abundant at a majority of the stations. Instead, tissue mercury concentrations were measured for each taxon and averaged for the station.

As expected, mercury levels in the sediments were high at the source, the chlor-alkali lagoon, and decreased rapidly to background levels of about 2 ppm near Post Point and the Nooksack River delta. Tissue mercury levels, however, were highest near Squalicum Waterway (1.7 to 2.1 ppm) and fairly low in the chloralkali lagoon (0.3 ppm). Although tissue mercury concentrations tended to be lower farther from the source than closer to it, tissue and sediment concentrations were not strongly correlated. It was hypothesized that inorganic mercury was more quickly methylated in the well-oxygenated sediments near the marina than in the anoxic sediments of the chlor-alkali lagoon. The methylmercury compounds formed near the marina would then be more readily taken up by benthos than the predominantly inorganic mercury in the lagoon.

Mercury concentrations in muscle tissue of various edible species [i.e. dungeness crab (Cancer magister), rock crab (C. productus), and shrimp (Crangon spp.)] caught in the inner bay were also reported. In most cases, levels were substantially below the F.D.A. safe level of 0.5 ppm. By far the highest concentration, 0.459 ppm, was found in muscle tissue of rock crab.

A natural history study (Webber, 1975) included qualitative surveys of the biota of intertidal beaches, a map of the distribution of eelgrass beds, and a list of invertebrate species caught in otter trawls and beach seines and observed during the beach surveys. Numbers and length frequency of fishes, dungeness crabs (Cancer magister), and three taxa of shrimps (Crangon spp., Pandalus spp., and Hippolytidae) were listed by trawl station.

Species composition and numerical abundance of invertebrates and fishes were roughly similar at trawl stations throughout Bellingham Bay. Mysids were the most abundant organisms in trawls, and crabs and shrimps were consistently present as well. Crangon spp. and Pandalus spp. were found at all stations, but hippolytid shrimps were caught at only two: one near Eliza Island, and one in the middle of Bellingham Bay. Many of the other large and immobile invertebrates, such as sea pens (Ptilosarcus gurneyi), bivalves, sea stars (except Pisaster ochraceus), and some of the prosobranch and opisthobranch molluscs were found probably in subtidal soft sediments (Table 5). However, their distribution within Bellingham Bay was not specifically studied.

Fewer invertebrate species were caught in beach seines than in trawls. Crangon spp. and dungeness crabs were relatively abundant near shore, but mysids and the other two shrimp taxa were absent.

Species composition of fishes and mobile invertebrates varied little in monthly trawls or seines over a one year period. The major exception was that outmigrating juvenile chinook salmon were present near shore only in June, July, and August.

The impact of primary-treated municipal sewer effluent on the macrobenthos near Post Point was studied by CH_2M Hill (CH_2M Hill, 1974; Shea et. al., 1981). Studies began in September 1972, before the Post Point Sewage Treatment Plant began operation (in May 1974), and continued to May 1975. Total numbers of organisms and species diversity at up to eight stations were reported on a quarterly basis. Most stations were within about 2 km of Post Point, but one station was a control near Portage Island. Stations were at about 20 to 29 m.

No consistent seasonal or spatial variation in total numbers was clearly shown. An apparent autumn increase was due to unusually high numbers at two stations farthest from Post Point in 1973, and at the station closest to Post Point in 1974. On subsequent dates, numbers at these stations had decreased to levels similar to those at other stations.

Species diversity, on the other hand, was greater at the control site than at stations closer to Post Point. Diversity (as defined by the Shannon-

Weiner index) appeared to vary seasonally as well, decreasing in autumn and increasing in spring.

At all stations, diversity and total abundance were similar before and after the sewage treatment plant began discharging effluent. Total abundance near Post Point decreased periodically to lower values than were ever seen near Portage Island. However, since variability in numbers within stations was not reported, the apparent difference cannot be demonstrated conclusively.

In 1976, macroinvertebrates were quantitatively sampled at selected shallow subtidal habitats in Northern Puget Sound (Smith, 1979). Three of the stations were within the Bellingham-Samish Bay system: in Samish Bay, near Portage Island, and near Eliza Island. Numerical abundance and species richness in major taxonomic groups were reported for three depths at each station. Species lists were available from unpublished raw data.

At all three stations, polychaetes, bivalves, and amphipods were the most species-rich and numerically abundant taxa. Ophiuroids were most numerous in mid-depth to deep water (6 to 16 m).

Although in shallow depths (3-5 m) the vegetative cover differed between stations, polychaetes, bivalves, and amphipods were uniformly the most numerous taxa (Table 6). There were some differences, however. Decapods were numerous at Samish Bay, where an eelgrass community was sampled, and at Eliza Island, where red algae and kelps were present. At Portage Island, where the substratum was bare sand, echinoids (sand dollars) and phoronids were numerically abundant in addition to polychaetes, bivalves, and amphipods.

Benthos was the most species rich and numerically abundant in the Samish Bay eelgrass community. Numbers tended to decrease with depth,

Table 6. Abundance in major taxonomic groups of macroinvertebrates (2mm and larger) in shallow subtidal stations at Portage Island (PI), Eliza Island (EI), and Samish Bay (SB). Mean numbers of individuals normalized to represent a 0.05m^2 quadrat size. Source: Smith, 1979, unpublished data.

Invertebrate Taxon	High Stratum			Mid Stratum			Low Stratum		
	PI (5m)	EI (3m)	SB (4m)	PI (9m)	EI (9m)	SB (10m)	PI (15m)	EI (16m)	SB (16m)
Anthozoa			0.5						
Platyhelminthes			5.1	0.7					
Nemertea	5.0	4.6	5.3	1.7	0.7	1.7	2.7	1.7	
Prosobranchia	4.7	20.9	0.3	0.7	0.7	4.3	0.7	2.3	2.7
Opisthobranchia			10.2			0.3			
Bivalvia	109.3	113.1	457.7	74.3	31.0	30.0	16.7	6.9	104.0
Polychaeta	128.0	107.3	522.9	333.0	67.3	224.3	65.7	29.5	133.0
Oligochaeta			0.3	0.3	0.3		0.7		
Sipuncula		1.0					0.3		
Copepoda			0.2						
Ostracoda	1.7			0.7			0.3	1.7	
Leptostraca			4.9					0.3	
Cirripedia	0.3	6.7				0.3			
Cumacea	8.3	2.3	0.2	4.0	1.3	1.3	0.3	0.3	12.0
Tanaidacea		16.7	6.8	0.7		0.3			
Isopoda	0.4		13.4			0.3	0.3		3.0
Amphipoda	15.3	30.2	379.1	44.7	5.3	24.3	54.3	3.2	25.0
Decapoda	0.2	51.7	55.0	10.0	12.3	60.0	1.0	6.5	12.0
Pycnogonida			0.2						
Asteroidea		0.3	0.2						
Echinoidea	20.7		0.2						
Holothuroidea	1.0	0.3	65.2		0.3				
Ophiuroidea		1.3	58.8	16.0	4.3	46.0	28.0	6.0	82.7
Phoronida	4.7			0.3			0.3		
Total	299.6	356.4	1586.5	487.1	123.5	393.1	171.3	58.4	374.4

although at Portage Island, the greatest density of organisms was found at the middle depth. Portage Island is within the influence of the freshwater outflow of the Nooksack River, and invertebrates of the shallow stratum at 5 m may occasionally be stressed by low salinity.

Webber (1978) conducted a study to characterize water quality and benthic biota of inner Bellingham Bay and to contribute biological information of use in choosing a suitable open water disposal site for dredge spoil. Water quality, demersal fishes, and benthic invertebrates were sampled a maximum of four times between May, 1977, and April, 1978. Stations in the city waterways were sampled twice; stations in other parts of the inner bay were sampled either one or two times.

At most stations, macroinvertebrates consisted primarily of polychaetes. Gammarid amphipods, cumaceans, and ophiuroids were numerous at a few stations as well. Bivalves, though present, were never very numerous.

Species assemblages varied within the inner bay. Benthos in inner and central waterway stations was impoverished compared to outer waterway stations, both in terms of numbers and species richness. This was particularly striking in Whatcom and I&J St. waterways. Here, very few organisms were found and no species clearly dominated numerically. Webber concluded that most benthic invertebrates were severely stressed by the periodic low salinity, low dissolved oxygen, and high temperatures observed in these nearshore waters.

Cirratulid polychaetes (mostly _Tharyx_ _multifilis_) were by far the most numerous organisms in outer Whatcom and I&J St. water-ways. They were also dominant at a subtidal station off Roeder Avenue (near I&J St. waterway).

At an open water disposal site near Starr Rock (see Fig. 5), cirratulids were abundant in some samples, while the polychaete Dorvillea sp. dominated in other samples. Total species richness was fairly high at this station. Few of the species were present in all samples, however.

Benthos was the most species-rich in Squalicum Waterway. In outer Squalicum Waterway as well as at a station off the Mt. Baker Plywood Company (further to the west), the polychaete Owenia fusiformis was the dominant organism in all samples. In central Squalicum Waterway, however, two apparent species assemblages were sampled. Owenia fusiformis dominated in one group of three samples, but cirratulids, gammarid amphipods, and cumacea dominated in the other three samples.

Finally, at two proposed open water disposal sites in the inner bay and a control station at a similar depth nearby in the outer bay, polychaetes were still fairly species-rich, but were not very numerous. The numerically dominant taxa were ophiuroids and gammarid amphipods. Since neither taxon was present in very high numbers, total abundance at these stations was low compared to that of shallower stations (Table 7). However, Webber (1978) cautioned that due to low sampling effort, these data may be inadequate. Similar numbers and species of benthic fishes were caught in both deeper and shallower water, except that in inner Whatcom Waterway, no fishes were caught. This corresponded with the near absence of benthic invertebrates.

No quantitative studies of macrobenthos were conducted in Bellingham or Samish Bays between 1978 and 1983. In a qualitative study monitoring water quality in Bellingham Bay before and after secondary treatment of pulp mill effluent began (Stanley, 1980), organisms on pilings and in the sediments of Whatcom Waterway were observed in the field. A

Table 7. Mean total abundance of macroinvertebrates in $0.05 m^2$ core samples from inner Bellingham Bay. Data from Webber, 1978. n=6, except at the New disposal and Bay stations, where n=3.

Location	Waterways			Other
	Inner	Center	Outer	Subtidal stations
Whatcom Waterway	2.5	3.5	100.0	
I&J Waterway	6.0	7.2	55.2	
Squalicum Waterway	9.2	268.0	132.7	
Old disposal				117.8
Boulevard				23.5
New disposal				36.0
Bay				15.0
Roeder				24.8
Mt. Baker Plywood				123.5

dramatic improvement in water quality was documented between spring of 1979 and spring of 1980. In 1980, barnacles, mussels, and algae were abundant on pilings which had been devoid of visible organisms in 1979. In both years, however, sediments were black and anoxic, and very few organisms were observed in benthic grabs. One of four grabs taken in 1980 contained a few "bloodworms", but no organisms were seen in the other three.

In addition to the above studies of macroinvertebrate communities as a whole, information exists for individual species of economic importance. Goodwin and Shaul (1978) give densities of hardshell clams for the subtidal inland marine waters of Washington. From these data, maps of harvestable clam beds were compiled (Koons and Cardwell, 1981). For the years 1973 to 1982, commercial catch statistics were compiled by the Washington State Department of Fisheries (WDF) for shellfish, groundfish, and midwater fish obtained from the Bellingham and Samish Bay area (D. Ward, pers. comm., 1983)

Several invertebrate species are harvested for commercial or recreational use in the Bellingham and Samish Bay area. Washington Department of Fisheries data include the following categories: dungeness crab (*Cancer magister*), oysters (*Crassostrea gigas*), clams (not specified, but can include butter clams (*Saxidomus giganteus*), littleneck clams (*Protothaca staminea* and *Venerupis japonica*), horse clams (*Tresus capax* and *T. nuttallii*), and soft-shell clams (*Mya arenaria*) as well as cockles (*Clinocardium nutalli*), shrimp (not specified, but probably *Pandalus* spp. or *Crangon* spp.), squid (not specified, probably *Loligo opalescens*), octopus (*Octopus dofleini*) and sea cucumbers (not specified, probably *Parastichopus californicus* or *Cucmaria* spp.). The areas for which statistics were compiled include Hale Passage, parts of Lummi Bay, and waters roughly between Lummi and Guemes Island, as well as the Bellingham-Samish Bay system defined in this review.

For the last ten years, dungeness crabs and oysters have together constituted almost the entire catch of macroinvertebrates (Table 8). Pacific oysters (C. gigas), are intertidal in distribution. They are an imported species, and are grown commercially in Samish Bay, but not in Bellingham Bay. Since they do not normally spawn in the study area, they are abundant only where they are seeded.

Dungeness crabs, in contrast, are native to the area and ubiquitous in the subtidal zone. In a natural history survey of Bellingham Bay, dungeness crabs were found near shore and in the deeper central part of the bay (Webber, 1975). They inhabit inner Bellingham Bay as well, and were absent only in the innermost part of Whatcom Waterway (Webber, 1978).

Commercially harvested clams were not listed by species. The location of clam harvesting within the region also was not given in catch data. All of the species included in the "clam" category occur in the region, primarily in sandy mud to mixed coarse sediments of the low intertidal to shallow subtidal zone. Hard-shell clams (i.e., butter, little-neck,and horse clams, and cockles) are as a group found in a coarser range of sediments (sandy mud to cobble) than the soft-shell clam, which lives in mud to sand. Commercially harvestable populations of hardshell clams (those with a density of 0.63 kg/m^2 or more as defined by Koons and Cardwell, 1981) were found off Point Francis on Portage Island, and in a small area in Hale Passage. No harvestable populations were found in Samish Bay. The authors noted, however, that the estuaries were poorly surveyed. Webber (1975) found small numbers of Tresus, Saxidomus, and

Table 8. Yearly landings (kg rd. weight) of commercially harvested invertebrates in the Bellingham-Samish Bay area; 1973 to 1982.

Year	Dungeness crabs	Oysters	Octopus	Clams	Other Invertebrates
1973	142,026	78,168	127	24,875	
1974	70,513	94,943	57		109[a]
1975	124,864	97,490	23		
1976	200,919	102,863	18		
1977	134,983	111,938	296		
1978	136,316	90,911	352	93	
1979	94,813	107,250	669	1,783	112[b]
1980	142,510	124,116	439		
1981	99,325	112,125	299	2,359	280[c]
1982	108,367	86,367	153	637	18[c]

Other invertebrates:
a - shrimp
b - sea cucumbers (72 kg); squid (41 kg)
c - scallops

Mya on the intertidal sand and mud flats near the mouth of the Nooksack River. Salinity or other stress may restrict growth of clam species near the Nooksack River. Nelson (1981) reported that intertidal butter clams taken from the northern tip of Portage Island were smaller than individuals of similar ages from either British Columbia or Alaska. He postulated that salinity stress was the cause of frequent checks in growth observed in individuals from this station.

The other commercially-harvested invertebrates are subtidal in distribution. Catch data may appear to indicate that these species are sparse in the study area, but the inference is not necessarily valid. For example, in otter trawls, Webber (1975) found shrimps (Crangon spp. and Pandalus spp.) to be widespread in Bellingham Bay. He remarked that Pandalus spp. might support a small local fishery. Distribution and abundance of octopus, squid, various scallop species, and sea cucumbers has not been determined for the study area. These species do occur in Bellingham Bay (Webber, 1975; see Table 5); most may occur in Samish Bay as well.

Role of Benthic Invertebrates in the Study Area

Benthic invertebrates are part of a marine community that includes a wide variety of biota, including bacteria, macroalgae and eelgrass, phytoplankton, fishes, birds, and mammals. The major groups found in the area are related in a food web characteristic of soft sediment habitats (Fig. 11). This diagram is based on data from several soft sediment stations in Northern Puget Sound and the Strait of Juan de Fuca (Long, 1983). While not specific to Bellingham and Samish Bays, it details general trophic relationships in the study area.

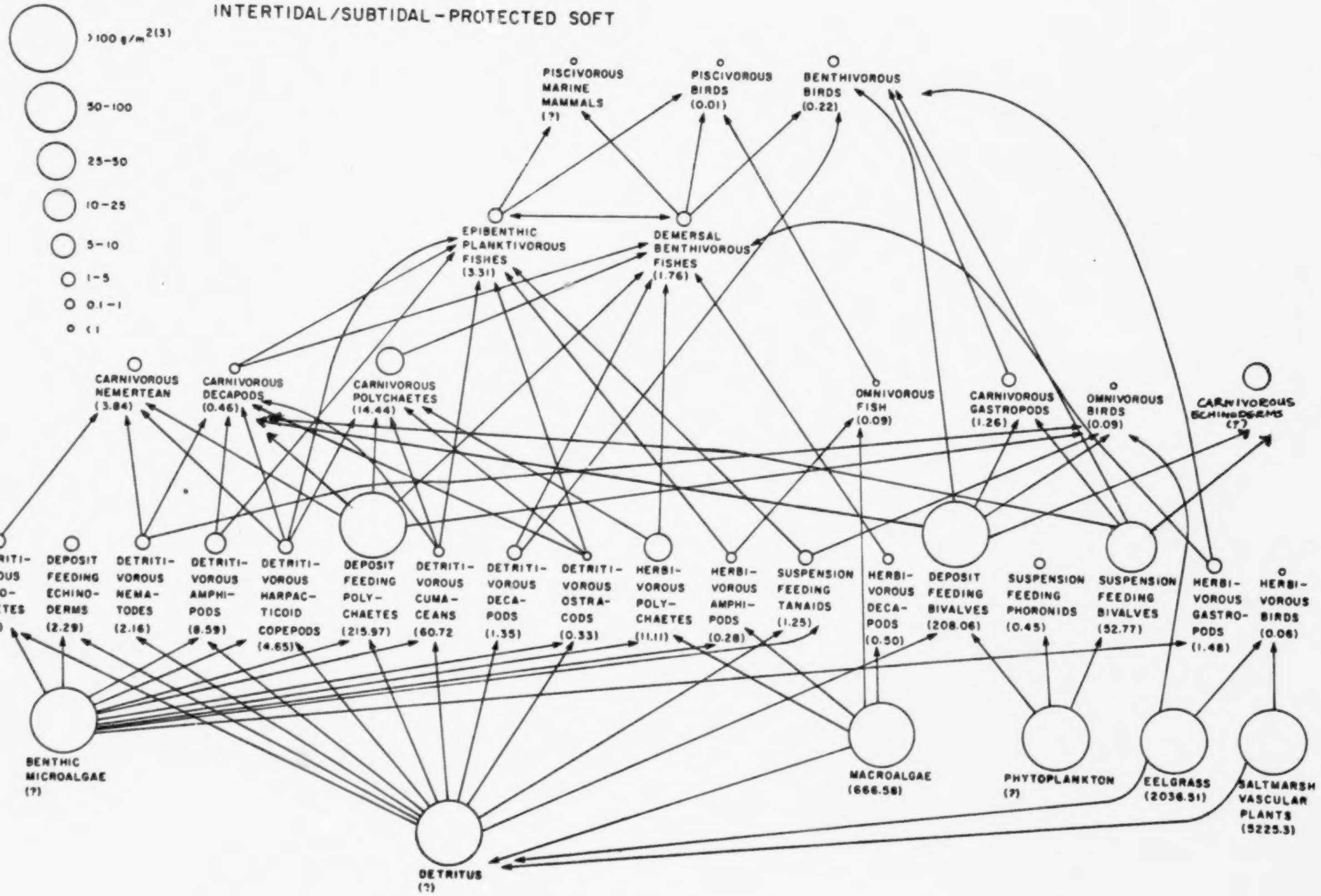

INTERTIDAL/SUBTIDAL-PROTECTED SOFT
>100 g/m2(3)
50-100
25-50
10-25
5-10
1-5
0.1-1
<1
PISCIVOROUS MARINE MAMMALS (?)
PISCIVOROUS BIRDS (0.01)
BENTHIVOROUS BIRDS (0.22)
EPIBENTHIC PLANKTIVOROUS FISHES (3.31)
DEMERSAL BENTHIVOROUS FISHES (1.76)
CARNIVOROUS NEMERTEAN (3.84)
CARNIVOROUS DECAPODS (0.46)
CARNIVOROUS POLYCHAETES (14.44)
OMNIVOROUS FISH (0.09)
CARNIVOROUS GASTROPODS (1.26)
OMNIVOROUS BIRDS (0.09)
CARNIVOROUS ECHINODERMS (?)
DETRITIVOROUS OLIGOCHAETES (1.94)
DEPOSIT FEEDING ECHINODERMS (2.29)
DETRITIVOROUS NEMATODES (2.16)
DETRITIVOROUS AMPHIPODS (8.59)
DETRITIVOROUS HARPACTICOID COPEPODS (4.65)
DEPOSIT FEEDING POLYCHAETES (215.97)
DETRITIVOROUS CUMACEANS (60.72
DETRITIVOROUS DECAPODS (1.35)
DETRITIVOROUS OSTRACODS (0.33)
HERBIVOROUS POLYCHAETES (11.11)
HERBIVOROUS AMPHIPODS (0.28)
SUSPENSION FEEDING TANAIDS (1.25)
HERBIVOROUS DECAPODS (0.50)
DEPOSIT FEEDING BIVALVES (208.06)
SUSPENSION FEEDING PHORONIDS (0.45)
SUSPENSION FEEDING BIVALVES (52.77)
HERBIVOROUS GASTROPODS (1.48)
HERBIVOROUS BIRDS (0.06)
BENTHIC MICROALGAE (?)
MACROALGAE (666.58)
PHYTOPLANKTON (?)
EELGRASS (2036.51)
SALTMARSH VASCULAR PLANTS (5225.3)
DETRITUS (?)

Fig. 6. Food web characteristic of protected unconsolidated intertidal/subtidal habitat. Biomass of major taxa in parentheses (grams/m^2 or grams/m^3) are average values for several Northern Puget Sound and Strait of Juan de Fuca stations. Source: Long, 1983, p. 49.

Most benthic invertebrates rely on the bacteria that break down organic matter as a primary source of food. Even suspension feeders may utilize bacteria in addition to phytoplankton. Very few invertebrate species feed directly on the primary producers of the system: phytoplankton, benthic macroalgae, and seagrasses. Indeed, algae and seagrasses are absent in most of the subtidal basin of the study area (Webber, 1975; Washington State Department of Natural Resources, 1972).

Invertebrates account for a relatively small percentage (about 10%) of the total catch of marine species commercially harvested by man in the Washington State Department of Fisheries Bellingham-Samish Bay area (again, including Hale Passage and some other areas outside the two Bays) (Table 21). However, small benthic and epibenthic organisms are eaten by many fish species that inhabit the region (Simenstad, 1979).

The study area is largely estuarine, and young salmon migrating from rivers and creeks feed close to shore until they are large enough to avoid predation in deeper water. All the rivers and creeks in the study area support runs of anadromous fishes (Shea et. al., 1981). The greatest number of salmon return to the Nooksack River. Accordingly, in spring and summer the nearshore zone of Bellingham Bay, including waters in the city's inner harbor, are important routes for outmigrating juvenile salmon. All other shorelines harbor young salmonids as well, primarily in spring and summer.

Benthic invertebrates and vegetation are also eaten by birds. The shallow, protected waters of Bellingham and Samish Bays harbor large populations of ducks, geese, shorebirds, and gulls (Shea et al., 1981). Many of these species feed on benthic invertebrates (Simenstad et al., 1979). Loons, grebes, and alcids which are also abundant, feed on benthic and

Table 9 Yearly landings (kilograms rd. weight) of commercially harvested marine animals in Bellingham - Samish Bay area; 1973 to 1982.

Year	Salmon[a]	Herring	Flatfishes[b]	Other fishes[c]	Invertebrates[d]
1973	596,725	904,229	5,655	15,621	245,196
1974	735,918	2,508,189	1,032	2,196	165,621
1975	833,105	1,908,633	31,514	9,687	222,377
1976	655,550	123,077	97,156	20,684	321,780
1977	941,657	775,931	330,757	95,142	247,217
1978	1,024,526	675,698	311,212	93,249	227,671
1979	1,001,007	1,130,564	269,631	133,631	204,515
1980	975,454	976,651	161,633	200,801	267,177
1981	836,092	496,166	102,313	58,916	214,306
1982	1,419,689	193,811	89,977	142,196	191,007

a- Chinook, chum, coho, pink, sockeye

b- english,'bellingham',rock,sand,dover,petrale, and unidentified soles; starry and arrowtooth flounders.

c- Dogfish,hake,pacific cod,tomcod,pollock,smelt,surfperch,whiting,sablefish,lingcod, ratfish,rockfish.skate,sturgeon,miscellaneous scrapfish.

d- dungeness crab,shrimp,clams,scallops,squid,octopus,oysters,sea cucumbers.

pelagic fishes, and thus, indirectly on invertebrates. Birds are less abundant in summer than in other seasons. The extent to which predators affect invertebrate communities in the study area is unknown.

METHODS

The locations of all sampled stations were selected by EPA, Region X, and are shown on Figures 6 and 7. Stations E01 - E12 were sampled by EPA; L01-L12, by WWU.

Stations L01 to L12 were designated by EPA as crosses on a plastic overlay of a navigation chart of Bellingham Bay. These locations were transferred to a chart and bearings (and angles between bearings) to fixed shore points were calculated. In the field approximate positions were established with a hand-held sighting compass. The final determination of position was made by measuring angles between the fixed points using a polaris and azimuth circle, with sighting leaves, attached to the highest point of the bridge of the research vessel, Leona III. When the angles corresponded to those predetermined on the chart, the vessel was anchored for sampling. For resampling stations L06, L07, and L08 for TVS in December (see below) the vessel was not anchored.

At each station two replicate (0.1 m^2) Van Veen grab samples were made for infauna. Color of the sediment, odor, per cent fullness of the grab, and other observations [for example, the presence of cerianthid (Anthozoan) tubes which disintegrate in washing the sample] were noted. The infaunal samples were field-screened to reduce the volume and preserved in 10%, buffered formalin. All samples were rescreened in the laboratory and the material retained on the screen preserved in either 70% ethanol or 50% isopropanol. In both field and laboratory, the controlling screen size was 1.0 mm mesh.

For sediment analyses at Stations L01-L12, a third Van Veen grab sample was taken. The grab was opened at the top and a subsample of

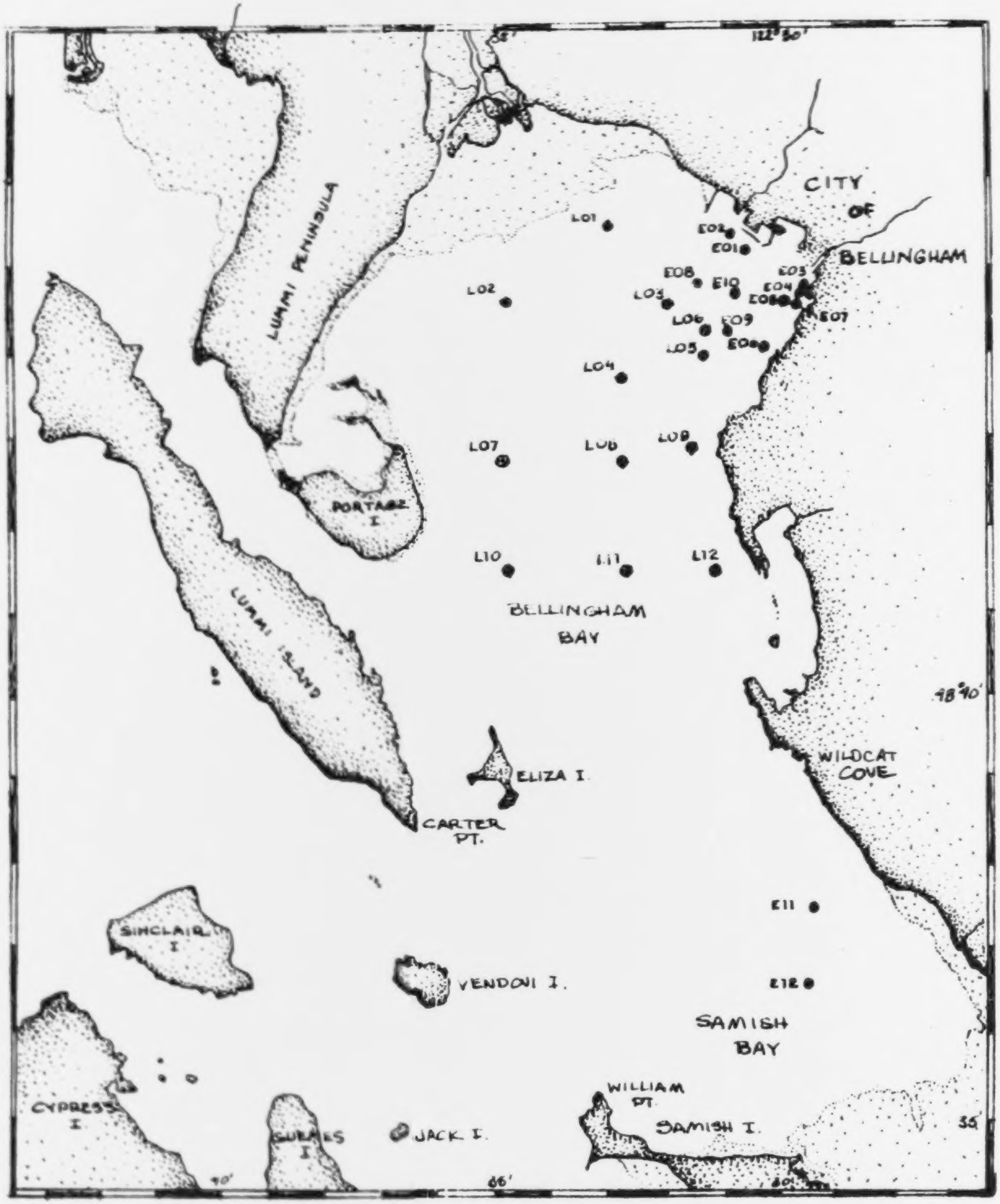


Figure 7: Location of infaunal benthos and sediment samples taken in May (E Stations) and October (L Stations), 1983

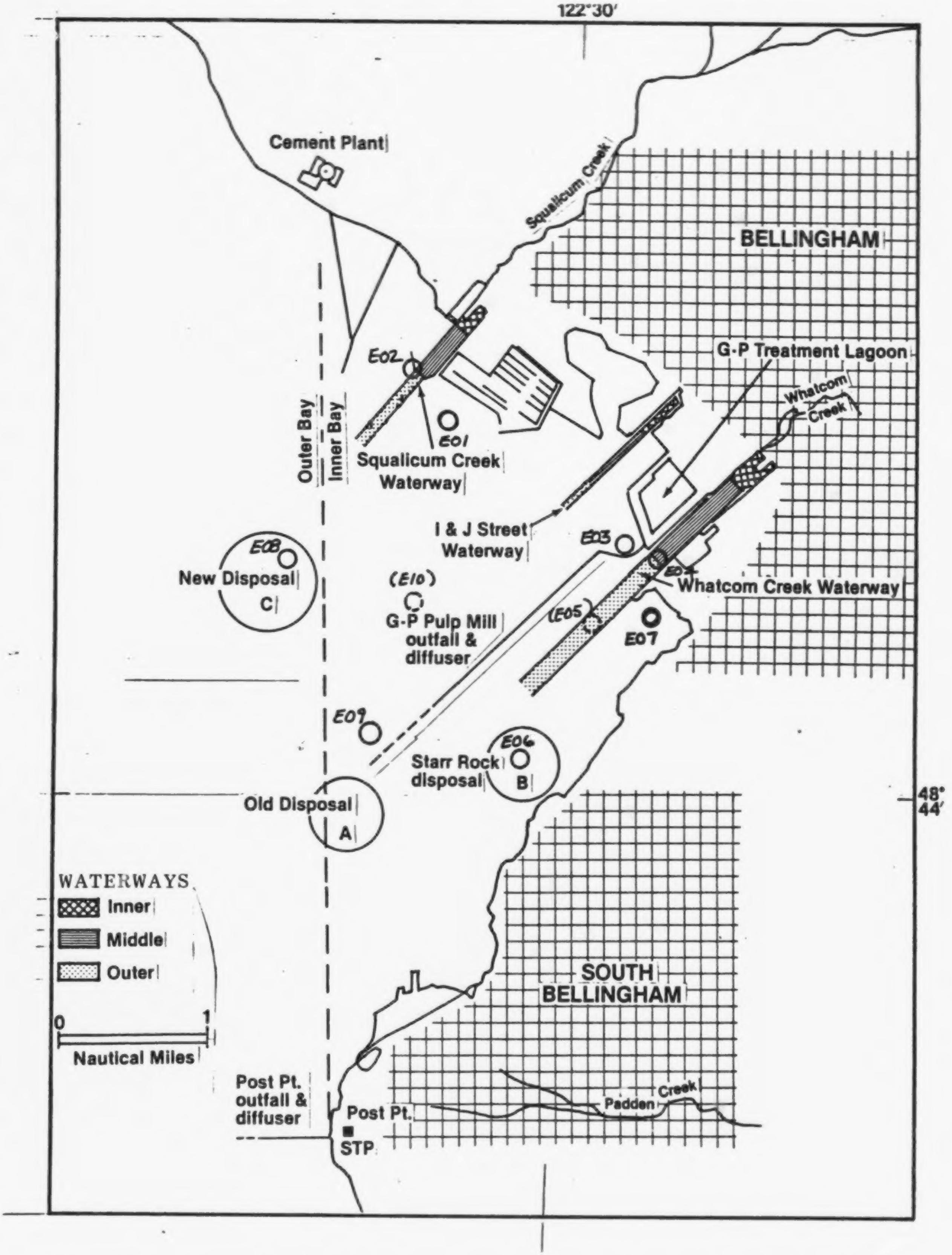


Figure 8: Location of stations in inner Bellingham Bay sampled in May, 1983.

more than 1 kg was taken from the upper 10 cm of the sediment with a previously unused, polyetheylene scoop. These subsamples were packed in crushed ice in an insulated container (Coleman picnic chest) where they remained until removed for TVS analysis. The portion of the sample not used to determine TVS was capped and refrigerated until size-distribution analyses were made.

Except as noted below, all TVS determinations were made within 24 hours of collection, and all samples were held at 0 C (ice-water mix) until analyzed. Prior to analysis, the entire sediment sub-sample was mixed with a stainless steel spatula. Two weighed (wet) aliquots of sediment from each subsample, approximately 10-20 grams, were placed in weighed 100 ml. round bottom evaporating dishes, which had been ignited at 550 C for 1 hour minimum. The samples were dried to constant weight at 110 C, followed by ignition at 550 C for a minimum of 4 hours.

The grams lost on ignition were related to the 105 C dry weight to obtain the grams of volatile organic matter lost per gram of sediment. The average of the two determinations per station x 100 was reported as per cent TVS by weight.

The sediment samples from stations L06, L07 and L08, the first stations visited by WWU on October 10, were removed from the ice chest on that day and placed in a refrigerator. These samples were not analyzed until November 1. These stations were resampled on December 12 and TVS analyses of these latter samples were completed on the day of collection.

A test was made for possible changes in TVS in the sediment collected at stations L06, L07, and L08, during the interval between collection and analysis. TVS at stations L09, L11, and L12, which had been determined within 24 hours of collection, were redetermined from the original samples at intervals of four and 16 days after collection. Samples from stations L09, L11, and L12 had been refrigerated following the within-24 hour determination of TVS.

The ratio between per cent TVS determined within 24 hours of collection and that determined at some interval following collection (delayed determination/within 24 hour determination) reflects retention of TVS during the interval. Samples from station L09 showed retention of 0.95 after 4 days and 1.07 after 16. At stations L11 and L12, the four day retention ratios were 0.87 and 0.92 respectively. The 16 day retentions were 1.04 and 0.98. The data from which these ratios were calculated, however, do not differ from one another significantly (ANOVA; F=2.88; p=0.12; n=12), and it can be concluded that the TVS determinations for LO9, L11, and L12 made after 16 days of storage in a refrigerator as reliably reflected TVS on the day of collection as did those determinations made on that day.

From this, it might be argued that the TVS data for stations L06, L07, and L08, determined on November 1 from samples held in a refrigerator since October 10, reliably reflect the actual TVS in the bottom sediments on the date of collection. These data, however, probably are not from the same normal distribution of numbers as those from TVS determination made on December 12 from collections made on that day (ANOVA; F=32.62; p=0.0004; n=12). Only one set of data for TVS should be reported, however, and those from the December 12 collection, having been subject to the same analytical protocol as were all other samples, were the ones selected.

TVS data for stations E01-E12 were provided by EPA Region X.

Sediment particle size analyses for samples from stations L01-L12 were made by a combination of wet sieving for sand fractions and settling to separate silt from clay.

A sediment sample was wet-sieved through a series of standard sieves (sizes Φ -1 to Φ +4 in whole increments). The material retained on each screen was dried and weighed. The total of the wet-sieved fractions was reported as sand. Except for a few "pebbles" noted at Station L11, no sediment coarser than sand was encountered.

The material that passed through the Φ +4 screen was mixed (shaken) for 5 minutes in a Biosonic vibrator and poured into a settling cylinder of approximately 25 cm diameter. The volume of fluid in the cylinder was standardized to a column height of 39.2 cm with distilled water, and the contents were mixed and permitted to settle. After 8 hours, the fluid fraction was carefully siphoned off. Both fractions were then desiccated at 50-75 C for several days until dry. The weight of the residue of the fluid fraction was clay (9 Φ and smaller particles); that of the residue of the settled fraction, silt (Folk, 1974, p. 40).

Sediment size data for stations E01-E12 were provided by EPA Region X.

For water quality at stations L01-L12, samples were taken from 3 points in the water column: -1 m, bottom, and half the distance to the bottom. The temperature readings were made in the field using a KAHL water bucket thermometer. Two BOD bottles were filled from the collecting bottle, one of which was fixed for the Winkler DO test. Titration for DO and analysis of the seond bottle for pH, total alkalinity, carbonate alkalinity, and CO_2, were according to the techniques of Strickland and Parsons (1972). Turbidity was measured by a Hach model 2100A turbid-imeter in Jackson turbidity units. Salinity was measured with an Endeco type 102 optical refractometer.

All samples of infaunal macrobenthos were rescreened in the laboratory on 1.0 mm mesh. The material retained on the screen was stored in alcohol. Prior to sorting, the samples were lightly dyed with rose bengal. For sorting, the material was spread out in white enamelled trays and examined under 2X or higher magnification. Sorters placed organisms by similarity categories in Petri dishes. Taxonomic determinations were made by Alice B. Benedict, who also weighed and counted the organisms. Weights were damp-dry (blotted) weights of alcohol-preserved specimens (total number by species) to the nearest 0.001g (Sartorius type 2255).

Identification of all organisms was as specific as possible. Fragments or incomplete specimens (Cerebratulus sp.), genera in which specific identification is not possible because of the present state of systematic knowledge (Tharyx sp. and others), or taxa in which specific determination requires special preservation or techniques (Nematoda, Nemertea, etc.) were treated at whatever level was possible.

Because of the very large number of Owenia fusiformis encountered at station L01, that species was subsampled as follows: each replicate sample was sorted and all taxa except O. fusiformis counted and weighed as indicated above. A damp-dry weight of the entire group of O. fusiformis was determined after which a subsample of not less than 1/10th of the mass was weighed. The worms in this subsample were removed from their tubes, counted and weighed. The tubes, including any that did not contain worms, were counted and weighed. The number and weight of worms for the entire sample were calculated from these data.

Representative specimens of 50 taxa selected by EPA Region X were sent to CH_2M Hill for verification of our identifications. The species sent for verification are indicated in Table 11, in which the species collected during this study are listed.

Physical and biological data were derived from methods and procedures outlined above. Physical data per station comprised one set of depth, percent by weight of sediment in gravel, sand, silt, and clay, and percent of sediment in the form of total volatile solids. A set of biological data for each replicate grab sample included species, number of individuals per species, and dry-blotted weight by species.

For purposes of reporting, species that comprised 10% of the total count and/or biomass in a replicate grab sample were designated dominants.

Bray-Curtis similarity coefficients were calculated for each pair of samples and matrices of similarity constructed on the basis of these calculations. One-way analyses of variance and Student-Newman-Keuls tests of difference between groups were performed. By regression analyses correlations between the physical and biological parameters estimated by the several data sets were tested.

All statistical tests are components of Statistical Package for the Social Sciences (SPSS, 1983) and were performed at the Western Washington University Computer Center.

Finally, the data were encoded in NODC file type 132 (Benthic organisms) and a tape of these data provided to EPA, Region X.

RESULTS

Summaries of results appear in this section. Actual data on which these summaries are based are given in Appendices 1-6. Table 10 is a compilation of field observations made at each station.

Grabs that were not 70% full were rejected. In most instances, the bottom at all stations was soft enough to allow adequate penetration. At station L01, however, the grab, although loaded with about 36 kg of extra weights, required numerous drops before two adequate samples could be obtained.

The only odor noted in sediments was H_2S, which was either "obvious" or "strong" or "very mild." No odor was detected at 10 stations. "Strong" or "obvious" H_2S was noted in sediment in the vicinity of Whatcom Waterway (stations E03, E04, and E07, but "no odor" at station E05 (in the mouth of the waterway); the general vicinity of the Post Point sewage diffuser (stations L08 and L09); and at one station (E12) in Samish Bay. At station L03 near the northeastern edge of the outer Bay, one sample had "obvious H_2S," and the other had none. Odor was not detected at adjacent station E08. Otherwise, Outer Bellingham Bay was characterized by "very mild H_2S" except at stations L01 and L02 near the Nooksack delta where no odor was detected. No odor was noted in the inner Bay other than in Whatcom Waterway, and one of two Samish Bay stations was without odor.

Table 10: BELLINGHAM BAY STATIONS SAMPLED IN MAY AND OCTOBER
LOCATION, DEPTH, AND QUALITATIVE SEDIMENT CHARACTERISTICS

STATION & LOCATION	DEPTH (m)	GRAB 1 % FULL	GRAB 2 % FULL	ODOR:GRAB 1	ODOR:GRAB 2	COLOR: GRAB 1	COLOR: GRAB 2
E01: 48 45'14"N 122 30'39"W	5.7	75	90	No H_2S	No H_2S	Grey-Black	Grey-Black
E02: 48 45'25"N 122 30'48"W	7.9	90	100	No H_2S	No H_2S	Grey-Green	Grey-Green
E03: 48 44'50"N 122 29'43"W	4.5	100	85	Strong H_2S	Strong H_2S	Brown-Black	Brown-Black
E04: 48 44'49"N 122 29'34"W	11.5	75	70	Obvious H_2S	Obvious H_2S	Brown-Black	Brown-Black
E05: 48 44'34"N 122 29'53"W	14.2	90	90	No H_2S	No H_2S	Grey-Green	Grey-Green
E06: 48 44'06"N 122 30'16"W	12.3	70	85	No H_2S	No H_2S	Grey-Green	Grey-Green
E07: 48 44'37"N 122 29'33"W	11.3	100	95	Strong H_2S	Strong H_2S	Grey-Brown	Grey-Brown
E08: 48 44'49"N 122 31'23"W	13.6	70	70	No H_2S	No H_2S	Grey-Green	Grey-Green
E09: 48 44'16"N 122 30'54"W	13.6	95	95	No H_2S	No H_2S	Green-Brown	Green-Brown
E10: 48 44'41"N 122 30'43"W	11.0	80	80	No H_2S	No H_2S	Grey-Green	Grey-Green
E11: 48 37'29"N 122 29'24"W	14.8	80	90	No H_2S	No H_2S	Grey-Green	Grey-Green
E12: 48 36'38"N 122 29'33"W	16.1	100	100	Strong H_2S	Obvious H_2S	Grey-Green	Grey-Green
L01: 48 45'30"N 122 33'00"W	7.6	70	80	No H_2S	No H_2S	Grey-Brwn:Lt Surface	Grey-Brwn:Lt Surface
L02: 48 44'35"N 122 34'55"W	10.7	70	65	No H_2S	No H_2S	Grey-Brown	Grey-Black
L03: 48 44'35"N 122 32'55"W	14.6	75	60	Obvious H_2S	No H_2S	Grey-Brown	Grey-Brwn:Lt Surface
L04: 48 43'45"N 122 32'45"W	23.8	85	80	Very Mild H_2S	Very Mild H_2S	Black	Black
L05: 48 44'00"N 122 31'20"W	18.3	90	90	Very Mild H_2S	Very Mild H_2S	Brown-Black	Brown-Black
L06: 48 43'20"N 122 31'15"W	21.9	80	80	Very Mild H_2S	Very Mild H_2S	Brown-Black:Lt Surf.	Brown-Black:Lt Surf.
L07: 48 42'46"N 122 34'55"W	27.4	80	80	Very Mild H_2S	Very Mild H_2S	Brown-Black:Lt Surf.	Brown-Black:Lt Surf.
L08: 48 42'46"N 122 32'50"W	29.2	85	85	Obvious H_2S	Obvious H_2S	Brown-Black:Lt Surf.	Brown-Black:Lt Surf.
L09: 48 42'55"N 122 31'35"W	27.4	85	80	Obvious H_2S	Obvious H_2S	Brown-Black:Lt Surf.	Brown-Black:Lt Surf.
L10: 48 41'30"N 122 34'50"W	27.4	90	90	Very Mild H_2S	Very Mild H_2S	Brown-Black	Brown-Black
L11: 48 41'30"N 122 32'46"W	25.6	90	90	Very Mild H_2S	Very Mild H_2S	Brown-Black:Lt Surf.	Brown-Black:Lt Surf.
L12: 48 41'30"N 122 31'05"W	23.8	85	90	Very Mild H_2S	Very Mild H_2S	Brown-Black:Lt Surf.	Brown-Black:Lt Surf.

The sediment at all stations except E09 (lower part of inner Bay) was described as being either gray or black. This notation was modified by WWU usually by brown (brown-black) in the Outer Bay and by EPA by green or brown (gray-green or gray-brown) in the inner. The minor differences noted both in odor and color may partially reflect the subjective judgements of different observers or may have resulted from seasonal or, as implied, spatial variations. The inner Bay was sampled in May by one agency; the outer, in October by the other.

Table 11 is a listing of hydrographic (for L stations) observations and TVS and size distributions for sediment samples. The surficial sediment in outer Bellingham Bay, except at station L01 at the edge of the Nooksack delta, was largely silt (68.4% to 96.4%; mean of 85.7 ± standard deviation of 9.64%; n=12 stations). Gravel was not encountered and sand (2.6 ± 1.96%) was essentially negligible. Clay fractions were highest at the Post Point outfall (L09) and at stations in the general vicinity (L03, L06, L08, and L12) where they accounted for from 15.4 to 31.6% (21.2 ± 7.7%; n=4). Otherwise, clay fractions in the outer Bay were small (0.6 to 8.9%).

Station L01 is at the edge of the prograding Nooksack delta. The firm sediment here was 32.6% sand, 21.7% silt and 45.7% clay.

Table 11: BELLINGHAM BAY STATIONS SAMPLED IN MAY AND OCTOBER
WATER QUALITY AND SEDIMENT GRAIN SIZE SUMMARY

STATION & LOCATION	DEPTH (M)	TEMP. (C)	SALINITY (0/00)	D.O. (ML/L)	T.V.S. (WT%)	GRAVEL (WT%)	SAND (WT%)	SILT (WT%)	CLAY (WT%)
E01: 48 45'14"N 122 30'39"W	5.7				5.90	0.0	1.7	53.6	44.7
E02: 48 45'25"N 122 30'48"W	7.9				8.70	0.0	2.3	68.9	28.8
E03: 48 44'50"N 122 29'43"W	4.5				14.80	3.5	18.1	44.3	34.1
E04: 48 44'49"N 122 29'34"W	11.5				11.90	.6	5.3	66.8	27.3
E05: 48 44'34"N 122 29'53"W	14.2				8.10	0.0	3.0	49.8	47.2
E06: 48 44'06"N 122 30'16"W	12.3				8.70	0.0	2.2	62.9	34.9
E07: 48 44'37"N 122 29'33"W	11.3				9.80	.1	7.2	48.4	44.4
E08: 48 44'49"N 122 31'23"W	13.6				5.60	1.3	23.1	43.6	32.0
E09: 48 44'16"N 122 30'54"W	13.6				7.60	0.0	5.5	49.1	45.4
E10: 48 44'41"N 122 30'43"W	11.0				6.40	1.1	23.5	44.5	31.0
E11: 48 37'29"N 122 29'24"W	14.8				3.00	.3	78.4	11.1	10.3
E12: 48 36'38"N 122 29'33"W	16.1				7.90	0.0	8.8	59.8	31.5
L01: 48 45'30"N 122 33'00"W	7.6	11.7	29.7	4.6	5.46	0.0	32.6	21.7	45.7
L02: 48 44'35"N 122 34'55"W	10.7	9.9	30.6	5.3	6.19	0.0	2.4	96.4	1.2
L03: 48 44'35"N 122 32'55"W	14.6	11.9	31.2	5.1	7.11	0.0	2.6	81.4	16.0
L04: 48 43'45"N 122 32'45"W	23.8	12.2	30.9	6.0	8.04	0.0	6.2	93.2	.6
L05: 48 44'00"N 122 31'20"W	18.3	11.8	31.7	6.0	7.79	0.0	5.0	91.3	3.7
L06: 48 43'20"N 122 31'15"W	21.9	12.2	29.7	5.8	9.41	0.0	1.2	83.4	15.4
L07: 48 42'46"N 122 34'55"W	27.4	12.2	30.2	5.9	8.98	0.0	3.1	94.3	2.6
L08: 48 42'46"N 122 32'50"W	29.2	12.2	31.1	5.8	10.00	0.0	1.1	83.3	15.6
L09: 48 42'55"N 122 31'35"W	27.4	12.2	30.1	6.5	9.53	0.0	0.0	68.4	31.6
L10: 48 41'30"N 122 34'50"W	27.4	12.0	29.7	6.5	8.17	0.0	.3	94.6	5.1
L11: 48 41'30"N 122 32'46"W	25.6	12.7	30.2	6.9	7.80	0.0	4.4	86.7	8.9
L12: 48 41'30"N 122 31'05"W	23.8	12.6	30.9	6.9	9.25	0.0	2.8	70.1	27.2

Inner Bay sediments (n=9 stations) included gravel (0.7 ± 1.1.%), sand (9.2 ± 8.8%), silt (53.2 ± 9.6%), and clay (37.0 ± 7.63%) and were more variable, but all contained more clay than did the outer Bay.

The two samples from Samish Bay were dissimilar. At station E11, the sediment was 78.4% sand, 11.1% silt, and 10.3% clay. At E12, the bottom deposits were 8.8% sand, 59.8% silt and 31.5% clay.

Total volatile solids in the outer Bay sediment varied from 5.5% at the edge of the Nooksack delta to 10.0% in the vicinity of the sewage outfall. The highest values were at the stations close to the diffuser. Indeed, if the two stations most influenced by the Nooksack are excluded, the outer Bellingham Bay sediment had a reasonably high and uniform (8.6 ± 0.94%; n=11) organic content. In the inner Bay, two stations near Whatcom Waterway (E03 and E04 adjacent to the Georgia Pacific Lagoon and Port of Bellingham Terminal) had the highest TVS: 14.8 and 11.9% respectively. All those stations in the Squalicum and Whatcom waterway vicinities (E02, E03, E04, E05, E06 and E07), considered together, had higher TVS (10.3 ± 2.57%; n=6) than was found in the outer Bay. Otherwise, the organic content of the inner Bay sediments was lower and more uniform (6.4 ± 0.88%; n=3) than that of the outer.

The two stations in Samish Bay differed in TVS as in other ways noted above. Station E11, at which the sediment had no odor of H_2S and was 78.4% sand, had only 3.0% TVS, the lowest organic content encountered. At station E12, where there was a strong odor of H_2S and the substrate was 91.3% silt and clay, the organic content was 7.9%.

Although never obvious in the sediment samples taken at stations L01-L12, wood chips, fibers and shell fragments sometimes were left on the -1, 0, +1 and (once) on the +2 screens. These materials were noted at all L stations except L09, and L10. At L04, 3.1%; at L11, 2.7%; and at L01, 2.3% of the total weight was organic particles (including shell fragments). Otherwise, less than 1% of the samples was fibers and shell remains.

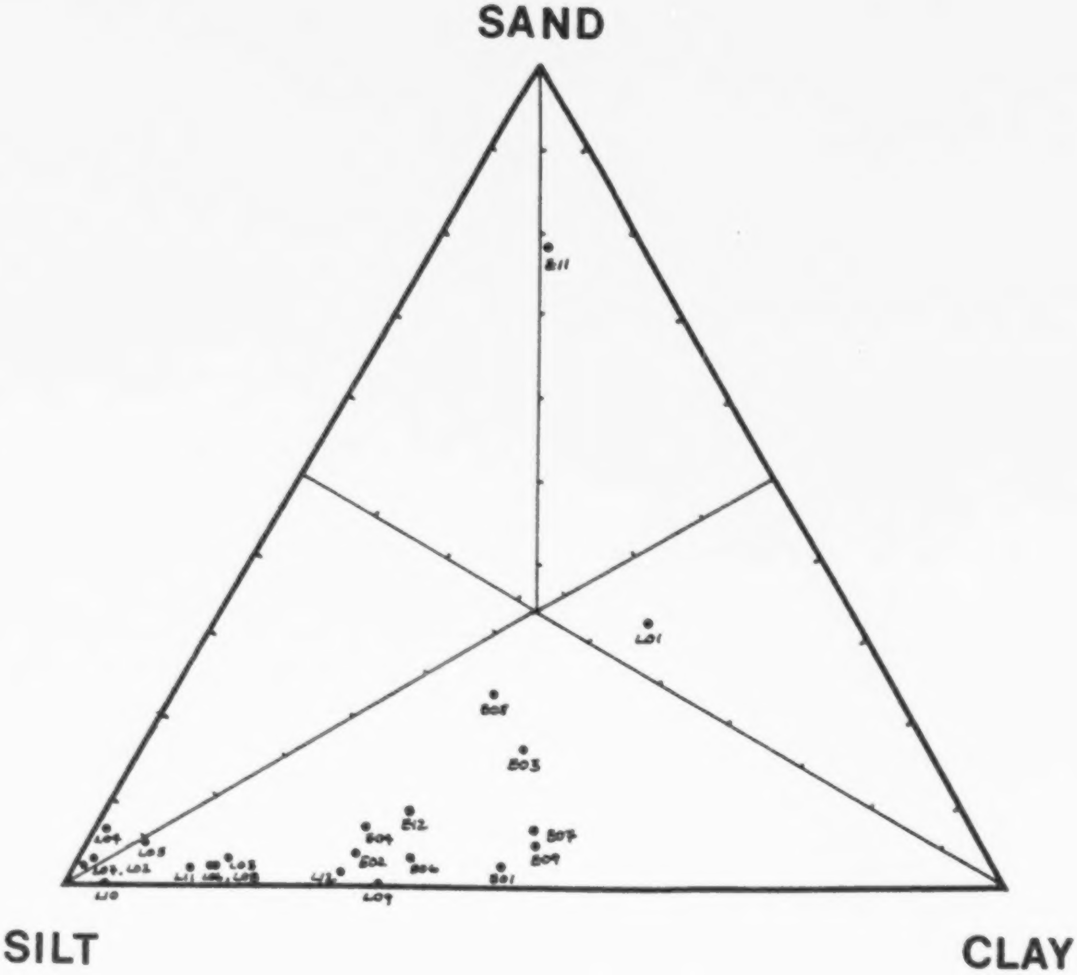
The distribution of the 24 stations on a sand-clay-silt triangular plot (Figure 9) shows the separation of the sandier E11 and L01, and a fairly complete distinction between the Inner Bay (E Station except E12) and outer Bay (L stations).

Table 12 is a species list, although certain of the entries are higher order taxa for reasons given above. The sequence of listing is that of the National Oceanic Data Center (NODC) Taxonomic Code. Readers interested in stations at which species were encountered or lists of species by station will find these data in the appendices. Dominant species in each replicate sample are listed in Table 13.

Summary biological data by station are presented in Tables 14 and 15. These data are consistent with treatment of the infauna as comprising four assemblages or communities in Bellingham Bay, and a fifth in Samish Bay, and these are described below.

The Owenia Community of the Delta:

The infauna of stations E01, L01, and L02 was dominated by the tubiculous polychaete, Owenia fusiformis, which accounted for 77.9% of the individuals and 25.2% of the mass in our samples. Other polychaetes identifiable only as Tharyx sp. made up 10.9% of the total number of individuals and 5.5% of the biomass of this assemblage. The remaining 11.2% of individuals and 69.3% of biomass were destributed among almost 60 species. Diversity was, at least for Bellingham Bay, moderate, with values depressed by the predominance of O. fusiformis. Other faunal



SEDIMENT GRAIN SIZE IN BELLINGHAM AND SAMISH BAYS

Inner Bellingham Bay; Stations E01 to E09
Outer Bellingham Bay; Stations L01 to L12
Samish Bay ; Stations E11 and E12

Figure 9: Sediment particle size in Bellingham and Samish Bays.

Table 12: Species or other taxa of infaunal macrobenthos from Van Veen grab samples taken in Bellingham and Samish Bays during May and October, 1983. Specimens of those species (or higher taxa) the names of which are followed by an asterisk have been sent to CH_2M Hill for taxonomic verification.

Phylum Cnidaria
    Class Anthozoa
        Pachycerianthus fimbriata*
        Halcampa decemtentaculata

Phylum Platyhelminthes
    Class Turbellaria
        unidentified species

Phylum Nemertea (Rhynchocoela)
    Class Enopla
        unidentified species
    Class Anopla
        Cerebratulus sp.

Phylum Annelida
    Class Polychaeta
        Eunoe uniseriata*
        Harmothoe imbricata
        Harmothoe lunulata
        Polyeunoa tuta*
        Tenonia kitsapensis*
        Pholoe minuta
        Sthenelais tertiaglabra
        Anaitides mucosa
        Anaitides maculata*
        Anaitides multiseriata*
        Eteone pacifica
        Eteone longa*
        Eulalia sp.
        Eulalia nigrimaculata
        Gyptis brevipalpa*
        Ophiodromus pugettensis*
        Pilargis berkeleyae
        Nereis sp.
        Nereis brandti
        Nereis procera*
        Platynereis bicanaliculata
        Nephtys longosetosa
        Nephtys ferruginea
        Glycera capitata
        Hemipodus borealis
        Glycinde picta
        Glycinde armigera

Table 12: continued

Gonadia maculata
Gonadia brunnea
Onuphis sp.
Onuphis iridescens
Lumbrinereis sp.
Lumbrinereis bicirrata
Dorvillea sp.
Dorvillea annulata*
Scoloplos pugettensis
Aricidea sp.
Aricidea lopezi
Tauberia gracilis*
Laonice cirrata
Polydora socialis*
Polydora cardalia*
Prionospia cirrifera
Prionospio steenstrupi
Polydora proboscidea*
Spiophanes sp.
Spiophanes berkeleyorum
Paraprionospio pinnata
Magelona sp.
Trochochaeta multisetosa
Cirratulus cirratus
Tharyx sp.
Chaetozone sp.
Chaetozone setosa
Cossura soyeri*
Pherusa plumosa
Scalibregma inflatum
Ammotrypane aulogaster
Armandia brevis
Travisia pupa
Sternaspis scutata
Capitella sp.
Heteromastus filiformis
Hereromastus filobranchus*
Mediomastus sp.
Mediomastus californiensis*
Barantolla americana*
Maldane glebiflex
Praxillela gracilis
Praxillela affinis
Euclymene zonalis
Euclymeninae, unidentified
Owenia fusiformis
Pectinaria granulata
Amage anops
Ampharete labrops*
Ampharete finmarchica*
Amphicteis scaphobranchiata
Melinna elisabethae
Asabellides sibirica*
Eupolymnia heterobranchia
Pista cristata*

Table 12: continued

- Polycirrus sp.
- Terebellides stroemi
- Euchone incolor
- Myxicola aesthetica*
- Potamilla intermedia*
- Potamilla ocellata*
- Sabella media

Phylum Mollusca

- Class Gastropoda, Subclass Prosobranchiata
  - Alvinia sp.*
  - Epitonium tinctum
  - Mitrella sp.
  - Nassarius mendicus
  - Oenopota levidensis

- Class Gastropoda, subclass Opisthobranchiata
  - Odostomia sp.
  - Turbonilla sp.
  - Cylichna sp.
  - Aglaga diomedea
  - Gastropteron pacificum

- Class Bivalvia
  - Acila castrensis*
  - Nucula tenuis
  - Nuculana minuta
  - Yoldia myalis
  - Yoldia scissurata
  - Yoldia thraciaeformis
  - Musculus laevigatus
  - Modeolus rectus
  - Axinopsida serricata*
  - Mysella tumida*
  - Clinocardium sp.
  - Solen sicarius
  - Mocoma sp.
  - Macoma nasuta
  - Tellina carpenteri
  - Transennella tantilla
  - Saxidomas giganteus
  - Psephidia lordi*
  - Humilaria kennerlyi*
  - Mya arenaria
  - Mya truncata
  - Pandora filosa
  - Lyonsia californica
  - Cardiomya oldroydi

- Class Scaphopoda
  - Pulsellum salishorum*

Table 12: continued

- Phylum Arthropoda, Subphylum Crustacea
    - Class Ostracoda
        - Myodocopa--unidentified
    - Class Malacostroca: Leptostraca
        - Nebalia pugettensis
    - Class Malocostraca: Peracarida
        - Mysidacea--unidentified (mysid)
        - Neomysis integer (mysid)
        - Lampropidae--unidentified* (cumacean)
        - Eudorella sp.* (cumacean)
        - Diastylis sp.* (cumacean)
        - Leptochelia dubia (tanaidacean)
        - Synidotea bicuspidata (isopod)
        - Munnogonium waldronense* (isopod)
        - Ampelisca sp. (amphipod)
        - Ampelisca agassizi (amphipod)
        - Ampelisca pugetica (amphipod)
        - Corophium sp. (amphipod)
        - Pontoporeia femorata (amphipod)
        - Photis sp. (amphipod)
        - Protomedia sp* (ampipod)
        - Lysianassidae--unidentified (amphipod)
        - Orchomene sp.* (amphipod)
        - Westwoodilla caecula* (amphipod)
        - Phoxocephalidae--unidentified (amphipod)
        - Heterophoxus oculatus* (amphipod)
        - Foxiphalus cognatus* (amphipod)
        - Rhepoxynius sp. (amphipod)
        - Dulichia sp. (amphipod)
        - Tritella pilimana* (amphipod)

    - Class Malacostraca: Eucarida
        - Crangon sp. (shrimp)
        - Crangon nigricauda (shrimp)
        - Crangon franciscorum* (shrimp)
        - Upogebia pugettensis (mud shrimp)
        - Callianassa californiensis* (ghost shrimp)
        - Brachyura--unidentified juveniles* (crabs)
        - Pugettia gracilis (decorator crab)
        - Scleroplax granulata* (pea crab)

- Phylum Sipuncula
    - Sipuncula--unidentified

- Phylum Priapulida
    - Priapulus caudatus*

- Phylum Phoronida
    - Phoronida--unidentified

- Phylum Echinodermata
    - Class Stelleroidea; Subclass Ophiuroidea
        - Amphiuridae*--unidentified

Table 12: continued

Class Holothuroidea
- Pentamera populifera
- Molpadia intermedia

Table 13: Dominant species at 12 stations in Bellingham Bay and two stations in Samish Bay sampled in May and October, 1983.

Station/ Replicate	Number	Mass
	Group 1 - Owenia Community	
E01-1	Owenia fusiformis	Owenia fusiformis Terebellides stroemi
E01-2	Owenia fusiformis	Owenia fusiformis Terebellides stroemi
L01-1	Tharyx sp. Owenia fusiformis	Tharyx sp. Owenia fusiformis
L01-2	Owenia fusiformis	Tharyx sp. Owenia fusiformis
L02-1	Tharyx sp. Owenia fusiformis	Humularia kennerlyi
L02-2	Tharyx sp. Owenia fusiformis	Molpadia intermedia
	Group 2 - Tharyx community of harbor	
E03-1	Dorvillea annulata Tharyx sp.	Tharyx sp. Macoma sp. Macoma nasuta Callianassa californiensis
E03-2	Dorvillea annulata Tharyx sp.	Macoma nasuta Callianassa californiensis
E04-1	Tharyx sp.	Tharyx sp. Macoma sp.
E04-2	Tharyx sp.	Tharyx sp. Macoma nasuta
E07-1	Tharyx sp.	Tharyx sp. Macoma sp. Crangon franciscorum
E07-2	Tharyx sp.	Tharyx sp. Clinocardium sp.

Table 13 (Continued)

	Group 3 - Tharyx community of inner bay	
E02-1	Tharyx sp. Protomedeia sp.	Glycinde picta Tharyx sp. Macoma sp. Macoma nasuta
E02-2	Tharyx sp. Protomedeia sp.	Tharyx sp. Macoma sp.
E06-1	Tharyx sp.	Nereis brandti Tharyx sp.
E06-2	Tharyx sp.	Glycinda picta Tharyx sp.
E08-1	Tharyx sp.	Tharyx sp. Mya arenaria Amphiuridae
E08-2	Tharyx sp.	Nephtys ferruginea Tharyx sp. Saxidomas giganteus
L03-1	Tharyx sp. Axinopsida serricata	Molpadia intermedia
L03-2	Tharyx sp. Axinopsida serricata	Tharyx sp. Axinopsida serricata
	Group 4 - Axinopsida community of outer bay	
E09-1	Glycinde picta Axinopsida serricata Eudorella sp.	Glycinde picta Heteromastus filibranchus Macoma nasuta
E09-2	Axinopsida serricata Psephidia lordi Eudorella sp.	Glycinde picta Amphicteis scaphobranchia Axinopsida serricata
L04-1	Tauberia gracilis Tharyx sp. Axinopsida serricata	Pachycerianthus fimbriata Nemertea Axinopsida serricata
L04-2	Tharyx sp. Axinopsida serricata	Pachycerianthus fimbriata Axinopsida serricata Saxidomas giganteus
L05-1	Tharyx sp. Axinopsida serricata	Nereis procera Glycinde picta Tharyx sp. Heteromastus filobranchus Axinopsida serricata

Table 13 (Continued)

L05-2	Tharyx sp. Axinopsida serricata	Pachycerianthus fimbriata Glycinde picta Heteromastus filobranchus
L06-1	Nereis procera Tauberia gracilis Axinopsida serricata	Gonadia brunnea Axinopsida serricata
L06-2	Glycinda picta Tauberia gracilis Axinopsida serricata	Glycinda picta Heteromastus filobranchus Axinopsida serricata
L07-1	Axinopsida serricata	Pachycerianthus fimbriata Nemertea
L07-2	Axinopsida serricata Eudorella sp.	Pachycerianthus fimbriata Axinopsida serricata Pentamera populifera
L08-1	Axinopsida serricata	Axinopsida serricata Saxidomas giganteus
L08-2	Axinopsida serricata	Axinopsida serricata Saxidomas giganteus
L09-1	Axinopsida serricata Mysella tumida	Laonice cirrata Pista cristata Saxidomas giganteus
L09-2	Nucula tenuis Axinopsida serricata	Hemipodus borealis Gonadia brunnea Axinopsida serricata Amphuiridae
L10-1	Axinopsida serricata Pentamera populifera	Pentamera populifera
L10-2	Tauberia gracilis Acilia castrensis Pentamera populifera	Cerebratulus sp. Acilia castrensis Pentamera populifera
L11-1	Acilia castrensis Axinopsida serricata	Acilia castrensis
L11-2	Tauberia gracilis Amphiuridae	Pachycerianthus fimbriata Sternaspis scutata Acilia castrensis Yoldia scissurella
L12-1	Axinopsida serricata Myodocopa Amphuiridae	Pachycerianthus fimbriata Molpadia intermedia
L12-2	Axinopsida serricata Myodocopa Eudorella sp. Amphiuridae	Travisia pupa Amphiuridae

Table 13 (Continued)

	Group 5 - Mixed community of Samish Bay	
E11-1	Myodocopa Eudorella sp. Brachyuran juveniles Amphiuridae	Yoldia scissurata Amphiuridae
E11-2	Brachyuran juveniles Amphiuridae	Solen sicarius Amphiuridae
E12-1	Psephidia lordi Eudorella sp. Brachyuran juveniles	Acilia castrensis Macoma nasuta Amphiuridae
E12-2	Psephidia lordi Eudorella sp. Brachyuran juveniles Amphiuridae	Glycinde picta Amphiuridae

Table 14: Richness and diversity of infaunal macrobenthos at 20 stations in Bellingham Bay and two stations in Samish Bay sampled in May and October, 1983.

Station	No. Species			No. Individuals/0.1m^2			Biomass g/0.1m^2			DIVERSITY (H)		
	Total	Rep 1	Rep 2	Mean	Rep 1	Rep 2	Mean	Rep 1	Rep 2	Total	Rep 1	Rep 2
1. Nooksack delta to Squalicum Harbor--*Owenia* community.												
E01	59	46	54	2,016.5	1,821	2,212	15.10	14.02	16.19	2.12	2.10	2.12
L01	53	43	38	8,715.0	3,835	13,595	12.54	9.56	15.52	0.50	0.85	0.36
LO2	47	32	34	1,090.5	902	1,279	34.82	37.82	32.02	1.68	1.83	1.52
2. Bellingham inner harbor--*Tharyx* community												
E03	40	33	33	1,831.5	1,859	1,804	22.59	15.26	29.90	1.46	1.53	1.33
E04	20	16	14	468.0	564	372	8.68	9.94	7.42	0.81	0.78	0.80
E07	10	7	6	162.5	245	80	1.57	2.71	0.42	0.34	0.30	0.38
3. Inner Bellingham Bay/north outer Bellingham Bay--*Tharyx* community												
E02	45	36	35	1,241.0	1,504	978	9.25	10.46	8.04	1.88	1.66.	2.10
E06	54	41	44	1,951.0	1,725	2,177	8.72	11.32	6.12	1.35	1.38	1.26
E08	56	45	40	1,972.0	2,459	1,485	8.23	5.56	10.90	1.08	1.18	0.86
E09	47	31	40	271.5	190	353	3.92	4.59	3.24	2.72	2.63	2.66
L03	46	40	26	663.5	512	815	19.99	35.46	4.51	1.42	1.82	1.05

Table 14 continued

Station	No. Species			No. Individuals/0.1m^2			Biomass g/0.1m^2			DIVERSITY (H)		
	Total	Rep 1	Rep 2	Mean	Rep 1	Rep 2	Mean	Rep 1	Rep 2	Total	Rep 1	Rep 2
				4. Outer Bellingham Bay--*Axinopsida* community								
L04	34	25	19	171.0	194	148	3.72	2.85	4.95	1.91	1.79	1.79
L05	18	12	13	73.5	62	85	2.07	1.09	3.06	1.74	1.65	1.59
L06	17	8	14	38.5	17	60	0.57	0.44	0.69	2.06	1.66	1.99
L07	42	25	33	244.5	139	350	14.12	14.13	14.10	2.28	2.17	2.20
L08	29	24	18	123.0	82	164	8.21	6.10	10.31	1.86	2.31	1.40
L09	26	17	18	41.0	42	40	2.10	3.20	1.00	2.72	2.43	2.57
L10	45	34	28	620.5	1,005	236	25.94	17.19	34.69	1.83	1.82	2.54
L11	50	37	33	234.0	298	170	15.78	21.06	10.49	2.92	2.73	2.86
L12	36	25	25	206.0	158	254	18.65	27.54	9.76	2.30	2.29	2.18
				5. Samish Bay--mixed community								
E11	66	33	53	500.5	472	529	16.12	8.59	23.65	2.73	2.41	2.64
E12	38	33	22	233.0	309	157	4.05	4.50	3.60	2.68	2.64	2.49

Table 15: Number of various taxa represented in the infaunal macrobenthos at 20 stations in Bellingham Bay and two stations in Samish Bay sampled in May and October, 1983. Figures in parentheses below the names of major taxonomic categories are the number of species (or higher taxa) identified in this study. The grouping of stations is that found in Table 12.

	E01	L01	L02	E03	E04	E07	E02	E06	E08	L03	E09	L04	L05	L06	L07	L08	L09	L10	L11	L12	E11	E12
Polychaeta (87)	33	29	22	21	13	5	18	31	31	25	24	19	10	10	22	15	12	21	23	17	34	14
Gastropoda (10)	2	5	6	1	0	0	1	2	5	4	3	3	2	2	0	1	1	5	4	2	1	1
Bivalvia (25)	1	8	7	7	2	2	6	9	7	9	8	6	3	3	12	8	8	11	15	8	9	9
Amphipoda (16)	11	3	3	2	1	0	8	4	3	1	5	1	0	0	1	1	1	1	2	1	11	5
Other Crustacea (18)	8	3	4	7	4	3	8	6	8	3	4	2	1	1	2	2	3	3	3	3	4	6
Echinodermata (3)	1	1	2	0	0	0	1	0	1	2	1	1	0	0	2	1	1	2	1	3	2	1
Other (8)	3	4	3	2	0	0	3	2	1	2	2	2	2	1	3	1	0	2	2	2	5	2
Total	59	53	47	40	20	10	45	54	56	46	47	34	18	17	42	29	26	45	50	36	66	38

components numerous in this community included the polychaetes Cirratulus cirratus, Terebellides stroemi, the amphipod, Protomedeia sp, the tanaid, Leptochelia dubia, and ostrocods (Myodocopa).

The Owenia community occupied fairly shallow water (5.7 to 10.7 m). Salinity in October was normal, temperature slightly lower than in the deeper outer Bay. Station L01, which had the highest content of sand, also had the lowest diversity resulting from the very large numbers of O. fusiformis. Otherwise, the sediment of the delta/Squalicum region was largely silt or silt and clay. TVS was in the lower range throughout.

The Bellingham inner harbor, Tharyx Community:

E03, E04 and E07 are in the Bellingham inner harbor. Owenia was present at E03, but not at either E04 or E07. Tharyx sp. dominated in the harbor, accounting for 64.9% of the individuals and 13.7% of the biomass. Another polychaete, Dorvillea annulata, which was present but not abundant in the delta, accounted for 21.1% of the numbers and 3.2% of the mass at these stations. Glycinde picta (polychaete) and Mysella tumida (bivalve) both widespread in Bellingham Bay, were more numerous in the inner harbor than were the other members of the relatively impoverished fauna. Most of the biomass was in a few, relatively large individuals (see Table 13).

The number of individuals, total biomass, species richness and index of diversity at E03 were comparable to those in the delta and near Squalicum Harbor. All of these parameters were considerably lower in the Whatcom Creek Waterway and at E07. The dominance of Tharyx at E07 reflected the paucity of other forms rather than a large number of even this species. At E07 near the Port of Bellingham, richness (number of species) and diversity were the lowest encountered; the number of individuals and total biomass, among the lowest.

Depth in the inner harbor is the result of dredging activity (11.3 to 14.2 m) possibly except at E03 (4.5 m) where sand comprised 18.1% of the sediment. This staton, at the edge of the Georgia Pacific sewage lagoon may have reflected relatively undisturbed bottom conditions. Otherwise, the sediments were silt with a high clay content and a small amount of sand. TVS values were high in the inner harbor.

The Tharyx Community of the inner Bay and north outer Bay:

The dominance of Tharyx extends to inner Bellingham Bay and the northern part of the outer Bay (our stations E02, E06, E08, and L03). Here Tharyx accounted for 68.5% of the individual organisms and 22.2% of the biomass of our samples. The presence of other species which were abundant enough to account for at least 10% of either numbers or mass at at least one station, however, justifies considering the faunistic assemblage of this region to be a third, recognizable community. Protomedeia sp were 5.0% of individuals; the bivalve, Axinopsida serricata, present in the delta but not the inner harbor, 3.9% (this species dominated much of the outer Bay); Glycinde picta, 2.5%; Eudorella sp. (cumacean), 2.0% Also notably present were the bivalves Psephidia lordi and Nuculana tenuis and the polychaete Tauberia gracilis, all of which were more abundant in the outer Bay. Glycinde was a dominant in the biomass of three stations, but the dominants of this category were often clams or large polychaetes with high individual weights.

Species richness in the inner Bay/north outer Bay Tharyx-dominated assemblage was about as high as was that of the delta and Squalicum region. With the notable exception of station E09 (biologically resembling the outer Bay community) the number of organisms was also comparable, but the biomass was somewhat lower. The value of 35.46g/0.1m^2 at L03 (replicate 1 in table 14) is attributable to a single Molpadia intermedia (sea cucumber) that weighed 23.38g. Diversity and species richness in this inner Bay Tharyx community was comparable to that of the delta.

Station E02, which actually is within the area otherwise occupied by the Owenia community, biologically resembled the Tharyx-dominated, inner Bay. This station lies in the dredged Squalicum Creek Waterway near the entrance of Squalicum Harbor.

Station E08, which is within the new disposal site (see Figure 7), had a much higher than average content of sand (23.1%) in the surficial sediment. This station also had more Owenia than had any other in this group. Station E10, near the diffuser for the Georgia Pacific Lagoon, also had a high sand content (23.5%). Otherwise, the inner Bay sediments were similar to those of the harbor. TVS values were slightly lower.

The Axinopsida Community of the outer Bay:

Axinopsida serricata was numerically dominant (22.6%) in the outer Bay, but overwhelming numerical dominance such as that of Owenia and Tharyx in the inner Bay no longer obtained. While a single species of the inner Bay or delta accounted for at least 65% of all individuals, in the majority of outer Bay stations the 12 most abundant species accounted for less than 60% of the total. The outer Bay numerical dominants and the percentage of each were: Axinopsida serricata, 22.6; Pentamera populifera, 21.3; Tharyx sp., 8.3; Amphiuridae 6.8; Tauberia gracilis 6.7; Eudorella sp., 4.9; Acilia castrensis, 4.4; Nucula tenuis, 2.9; Myodocopa, 2.2; Mysella tumida, 1.2; Glycinde picta, 0.9%; and Nereis procera, 0.4%. Even this listing, however, requires qualification. The holothurian, Pentamera populifera, was abundant only at L10, and absent from stations except that and L07. *Tharyx* sp. was abundant only at stations L04, L05, L06 and L07, although encountered at all except L12, *Eudorella* sp., *Nucula tenuis*, *Mysella tumida* (bivalve), *Acelia castrensis* (bivalve), and amphiuridae (brittle stars) were abundant only at stations L07, L08, L09, L10, L11, and L12. Clearly, in the outer Bay, although *Axinopsida* and *Tauberia* seemed uniformly distributed, richness, numbers and biomass increased from north to south.

The large burrowing anemone, *Pachycerianthus fimbriata*, although never numerous, was a dominant in the biomass of one-third of the samples of the outer Bay. Also among the species dominant in biomass were large polychaetes (*Heteromastus filobranchus*, *Nereis procera Gonadia brunnea*), the Washington clam (*Saxidomus giganteus*), and an unidentifiable nemertean (probably *Cerebratulus*).

Station L10, the most removed from the developed shoreline of the City of Bellingham, had both the highest number of organisms and the greatest biomass of the sampled areas of the outer Bay. Even the highest values for richness, productivity (as indicated by standing stock), and diversity of the outer Bay, at those stations farthest removed from the City, however were only comparable and sometimes lower than those for the delta, the vicinity of Squalicum Harbor, station E03 in the inner harbor, or stations in the inner Bay other than E09. Indeed, two of the outer Bay stations, L05 and L06, were among the poorest in number of species and rank along with L08 and L09 as lowest in numbers and (with E07) biomass.

The outer Bay sediment was predominantly silt (84.7 ± 9.4%; n=13) The highest clay content (24.8 ± 8.3%; n=3) was found at stations L08, L09, and L12, those closest (and down drift) from the Post Point sewage outfall. TVS in the outer Bay was 8.2 ± 0.8% (n=10) if stations L08, L09, and L12 (TVS of 9.6 ± 0.4%) were not included.

The Samish Bay Biota

The infauna of Samish Bay, as revealed by four samples made at two stations, may be considered richer and more diverse but probably not more abundant than that of most of Bellingham Bay. The most numerically abundant faunal components were juvenile crabs (27.1%), tanaidaceans (12.6%), amphiuridae (10.2%), myodocopan ostracods (9.0%) and the bivalve *Psephidia lordi* (93.9%). Brittle stars alone accounted for 66.6% of the biomass.

These stations were dissimilar in both TVS content and particle size distribution of the sediment.

One-way analysis of variance (ANOVA) was used to test the null hypothesis that the biological parameters (number of species, count, and biomass) were drawn from the same population ($H_0 : \mu_1 = \mu_2 = \ldots \mu_n$ where n=22 is the number of stations sampled). The alternative hypothesis is that at least one station mean differs from the other stations means (H_1 : there exists $i \neq j$ such that $\mu_1 \neq \mu j$). The ANOVA indicated that for each individual variate, there were significant differences.

Student-Newman-Keuls (SNK) tests were used to sort the station means into homogenous subsets (those which do not differ significantly, pairwise). Results of the tests for each of the variates: number of individuals, biomass and number of species are summarized on pages 82, 83, and 84, respectively.

The SNK test of means of number of organisms per station (page 82) separates L01 from all others, and the biological data (see Table 13) identify the origin of this distinction as a very large number of the tubiculous polychaete, *Owenia fusiformis* found primarily in one sample.

Comparisons between Stations

1) H: The mean number of individuals at each station is the same.

Reject H; $p < 0.001$

Source	DF	MS	F
Between	21	6827062	3.069
Within	22	2224245	
Total	43		

Student-Newman-Keuls

Station	Mean Count (no./$0.1 m^2$)	Groups	
L06	38.5	A	
L09	41.0	A	
L05	73.5	A	
L08	123.0	A	
E07	162.5	A	
L04	171.0	A	
L12	206.0	A	
E12	233.0	A	
L11	234.0	A	
L07	244.5	A	
E09	271.5	A	
E04	468.0	A	
E11	500.2	A	
L10	620.5	A	
L03	663.5	A	
L02	1090.5	A	
E02	1241.0	A	
E03	1831.5	A	
E06	1951.0	A	
E08	1972.0	A	
E01	2016.5	A	
L01	8115.00		B

Comparisons between Stations

1) H: The mean dry-blotted weight of organisms at each station is the same.
Reject H; $p < 0.001$

Source	DF	MS	F
Between	21	159.434	3.033
Within	22	52.558	
Total	43		

Student-Newman-Keuls

Station	Mean Weight ($g/0.1m^2$)	Groups	
L06	0.56	A	
E07	1.57	A	
L05	2.07	A	
L09	2.10	A	
L04	3.72	A	
E09	3.92	A	
E12	4.05	A	
L08	8.21	A	B
E08	8.23	A	B
E04	8.68	A	B
E06	8.72	A	B
E02	9.25	A	B
L01	12.54	A	B
L07	14.12	A	B
E01	15.10	A	B
L11	15.78	A	B
E11	16.12	A	B
L12	18.65	A	B
L03	19.99	A	B
E03	22.59	A	B
L10	25.94	A	B
L02	34.82		B

Comparisons between Stations

1) H: The mean number of species at each station is the same.
Reject H; $p < 0.001$

Source	DF	MS	F
Between	21	273.114	10.387
Within	22	26.295	
Total	43		

Student-Newman-Keuls

Station	Mean No. of Spp.	Groups							
E07	6.50	A							
L06	11.00	A	B						
L05	12.50	A	B	C					
E04	15.00	A	B	C	D				
L09	17.50	A	B	C	D	E			
L08	21.00	A	B	C	D	E			
L04	22.00	A	B	C	D	E	F		
L12	25.00		B	C	D	E	F	G	
E12	27.50		B	C	D	E	F	G	
L07	29.00			C	D	E	F	G	
L10	31.00				D	E	F	G	
E02	33.00				D	E	F	G	
E03	33.00				D	E	F	G	H
L02	33.00				D	E	F	G	H
L03	33.00				D	E	F	G	H
L11	35.00					E	F	G	H
E09	35.50					E	F	G	H
L01	40.50						F	G	H
E06	42.50							G	H
E08	42.50							G	H
E11	43.00							G	H
E01	50.00								H

When the SNK test is applied to station means for total dry-blotted weight, the test recognizes two groups or subsets having different population means, unfortunately, the test is unable to determine to which of these subsets most of the stations should be assigned. Stations L06, E07, L05, L04, E09, and E12 belong only to the group having the smaller population mean, and station L02, only to the other (see page 83). At least these non-overlapping means may be considered to be in separate subsets (Zar, 1974, p. 154). The stations having the smaller population means are found in the Tharyx communities of the inner harbor of the inner Bay/north Outer Bay and the northern part of the Axinopsida community of the outer Bay (see Table 13), but no clear pattern of distribution emerges. Station L02, the only non-overlap member of group B, is one of three delta stations.

In the SNK test of species richness (means of number of species per sample) eight subsets having different population means results (groups A-H on page 84), but the test fails to identify to which of from two to six of the subsets virtually all of the station means should be assigned. Stations E07, L06, L05, E04, L09, L08 and L04 (group A) are not from the same population (or subset) as are stations L12, E12, L07, L10, E03, L02, L03, L11, E02, E09, L01, E06, E08, and E11 (group G) or L03, L11, ... E08, E11 and E01 (group H). The test can not assign most of the stations in groups G and A to one subset or the other, although both groups of stations differ from subset A. Further, if station L04 (which may fit either group) is ignored, groups A and F (L12, E12, L07, L10, E03, L02, L03, L11, E02, E09, and L01) are different subsets. It is also arguable that groups B and C differ from H, but not from G. (See SOKAL and ROHLF, 1969, page 242).

The stations comprising the set with the lowest population mean (group A) are in both the Tharyx community of the inner harbor and the Axinopsida assemblage of the outer Bay. Four of these stations, E07, L04, L05, and L06, also belong to the group having the lower mean biomass (group A stations not also in group B on page 83). The separation of A stations from G and H stations, however, may not be related to distribution or community composition since the latter (non-A stations) occur in all areas of the Bay.

In view of the small number of samples per station and often large variance at many stations (see table 14 for data) an alternative interpretation of the SNK test results is that a Type II error may have been made in the analysis of variance (see Zar, 1974, page 154).

Similarity dendrograms based on all species (Figure 10) and on dominant species alone (Figure 11) show often wide disparity between replicates at single stations. Biological evidence dealt with above to the contrary, the entire set of 44 samples does not separate into meaningful subsets on the basis of number, weight, or number of species.

In comparisons of all the data for each replicate, E12-1 and E12-2 have 92% dissimilarity and only the two replicates from L04, L05, L10, E03, E07, and E06 have less than 50% dissimilarity (see Figure 10).

If only the dominant species are considered, L04 retains less than 50% dissimilarity (L05, L10, E03, E07 and E06 have greater than that) but is joined by L06, E01, E04, and E11 (see Figure 11).

In either treatment, the samples most alike (L10-1, L07-2, L04-2 and E09-2; L04-1 and E11-2; and L12-2 and L11-1 in Figure 10; and E06-1 and L06-2; and L05-2 and L04-2 in Figure 11) are from separate stations and often separate biological assemblages.

FIGURE 10: Similarity dendrogram of Bray-Curtis coefficients of all biological data

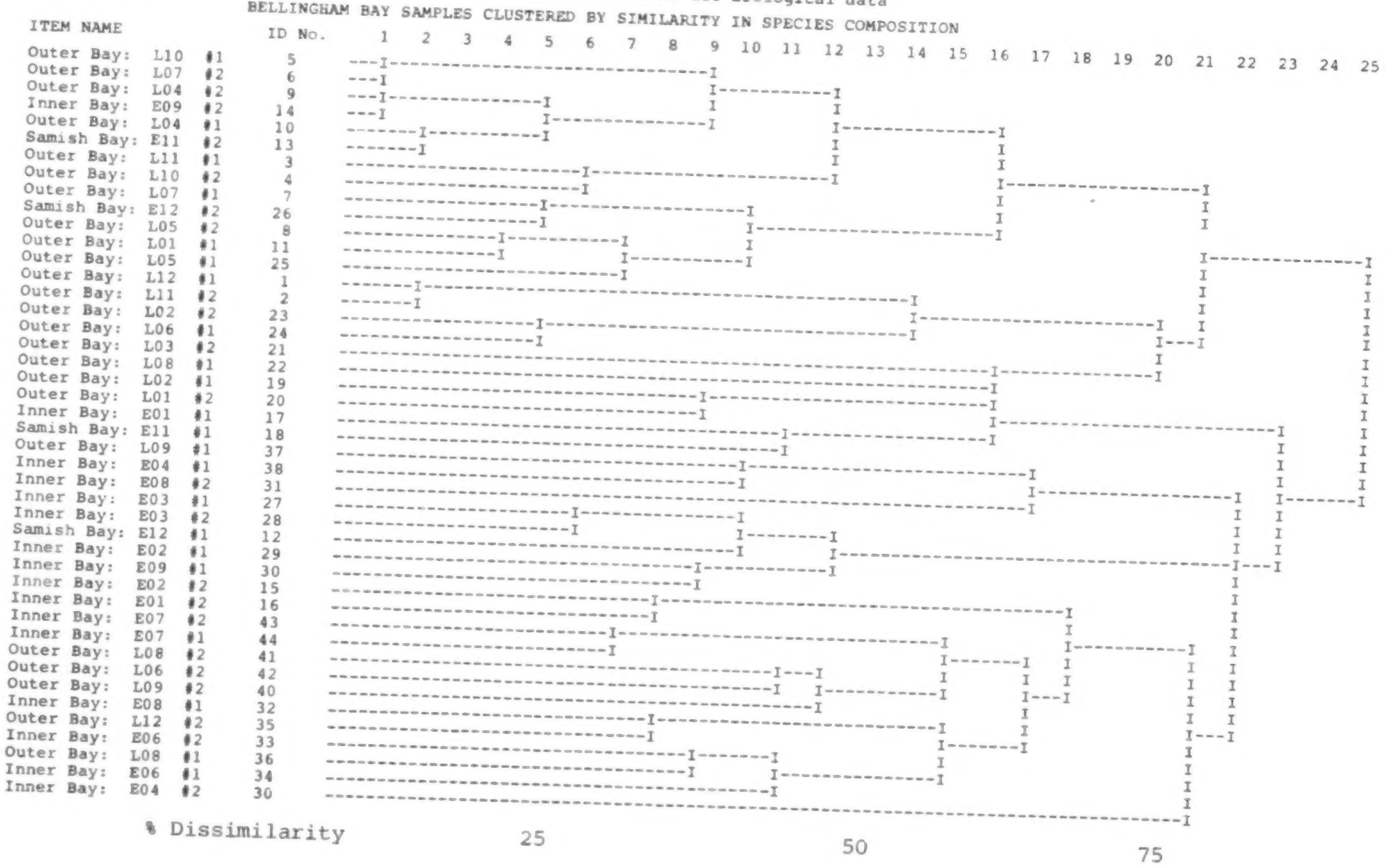
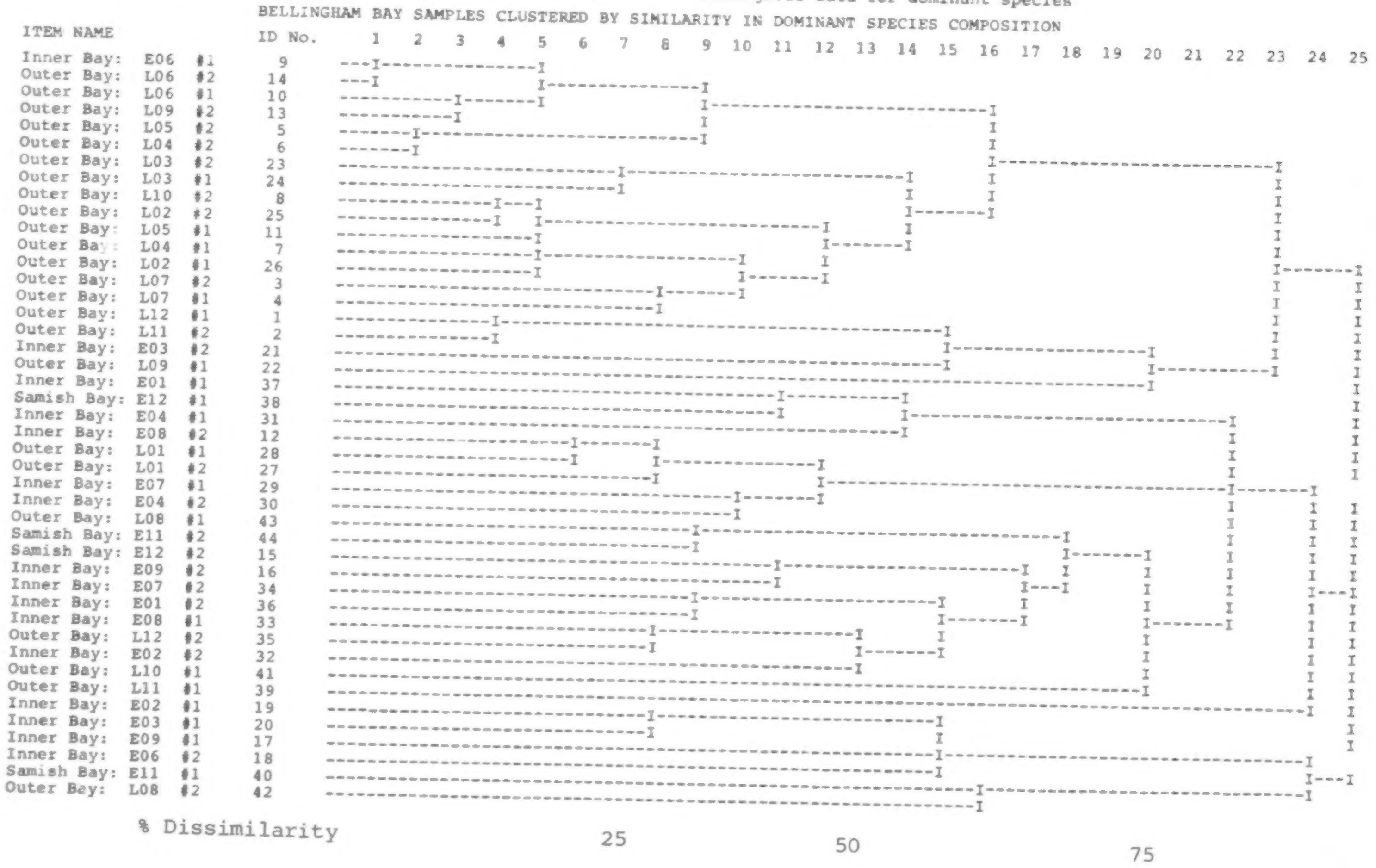


FIGURE 11: Similarity dendrograms of Bray-Curtis coefficients of biological data for dominant species



Correlations between biological and physical data were sought in regression analyses. Appropriate statistics of these analyses appear in Tables 16 to 19.

The most striking result of regression analysis was that although there was often a significantly non-zero correlation between variate pairs, the R^2 values were quite low. This means that where there was a significantly non-zero correlation, a very low precent of the variation in the ordinate variable (i.e., count, weight, number of species, or TVS, in Tables 16, 17, 18, and 19, respectively) was accounted for by the variables in the abscissa.

Regression analyses indicate that the total number of organisms in samples vaired directly with the number of species present and with the clay content of the substrate. The number of organisms vaired inversely with depth and with the percent of silt. The correlations with depth and silt may be the same: the deeper parts of the Bay also are the siltiest. The inverse relationship between number and silt plus clay (the reciprocal of sand) and silt plus sand (the reciprocal of clay) plus a lower value of R^2 for silt than for clay (Table 17) indicate that the positive correlation with clay is of less predictive value than the negative correlations with silt and depth. A positive correlation between number of individuals and number of species seems of limited value.

The total mass of organisms in the samples varied directly with the number of species and with the percentage of sand plus silt (the reciprocal of clay). As expected, there was an inverse relationship with clay. The correlations of mass with number of species and number of individuals with number of species would be more useful if a comparable relationship between number of individuals and mass were demonstrable, but the analysis did not support that.

Table 16 - Regression statistics for total number of organisms (ordinate) against variables (abscissa). For each regression, n=44. Values marked with an asterisk are significant at the 95% confidence level.

Abscissa	Slope[2]	Intercept[2]	Std. Error[2]	R^2	Significance	$\bar{X}$ Abscissa
Weight[1]	26.95	724,82	2,121.48	0.02	0.20....	11.49
No. Spp.	64.02	-827.23	1,990.61	0.13	0.01*...	29.16
Depth	-115.75	2,980.92	1,939.83	0.18	0.00*...	16.79
TVS	-201.87	2,706.13	2,084.15	0.05	0.07....	8.26
% Sand	28.18	723.82	2,081.07	0.05	0.06....	9.74
% Silt	-39.54	3,687.56	1,920.67	0.19	0.00*...	66.97
% Clay	51.45	-146.25	1,983.37	0.14	0.01*...	23.04
% Sand & Silt[3]	-51.06	5,014.51	1,969.47	0.15	0.00*...	76.70
% Silt & Clay	-32.55	3,969.27	2,062.59	0.07	0.04*...	90.01

[1] dry-blotted weight

[2] expressed in ordinate units of which the range is 0 to 13, 597.

[3] Sand plus silt is clearly the reciprocal of clay, as silt plus clay is of sand. The square of the correlation (R^2) indicates the extent to which the total variability in Y is accounted for by regressing Y on X (Zar, 1974).

Table 17 - Regression statistics for total dry-blotted weight of organisms (ordinate) against variables (abscissa). For each regression, n=44. Values marked with an asterisk are significant at the 95% confidence level.

Abscissa	Slope[1]	Intercept[1]	Std. Error[1]	R^2	Significance	$\bar{X}$ Abscissa
No. Spp.	0.37	0.92	9.32	0.19	0.00*...	29.16
Depth	-0.16	14.44	10.28	0.01	0.21....	16.79
TVS	-0.42	15.17	10.30	0.01	0.26....	8.26
% Sand	0.07	10.88	10.27	0.01	0.21....	9.74
% Silt	0.05	8.53	10.29	0.01	0.24....	66.97
% Clay	-0.17	15.71	9.99	0.07	0.04*...	23.04
% Sand & Silt	0.18	-2.67	9.91	0.08	0.03*...	76.70
% Silt & Clay	-0.05	16.37	10.32	0.01	0.28....	90.01

[1] in ordinate units of which the range is 0 to 40.

Table 18 - Regression statistics for number of species (ordinate) against variables (abscissa). For each regression, n=44. Values marked with an asterisk are significant at the 95% confidence level.

Abscissa	Slope[1]	Intercept[1]	Std. Error[1]	R^2	Significance	$\bar{X}$ Abscissa
Depth	-0.60	39.31	11.32	0.15	0.00*. . .	16.79
TVS	-2.52	49.99	10.66	0.24	0.00*. . .	8.26
% Sand	0.22	26.73	11.61	0.10	0.02*. . .	9.74
% Silt	-0.20	42.66	11.28	0.15	0.01*. . .	66.97
% Clay	0.16	25.49	12.01	0.04	0.09*. . .	23.04
% Sand & Silt	-0.17	42.20	11.95	0.05	0.07. . . .	76.70
% Silt & Clay	-0.25	51.48	11.47	0.12	0.01*. . .	90.01

---

[1] range of ordinate is 0-56

Table 19 - Regression statistics for percentage of Total Volatile Solids (ordinate) against variables (abscissa). For each regression, n=44. Values marked with an asterisk are significant at the 95% confidence level.

Abscissa	Slope[2]	Intercept[2]	Std. Error[2]	R^2	Significance	$\bar{X}$ Abscissa
Depth	0.02	7.96	2.40	0.00	0.36. . . .	16.79
% Sand	-0.06	8.93	2.14	0.21	0.00*. . .	9.74
% Silt	0.03	6.49	2.32	0.07	0.04*. . .	66.97
% Clay	0 02	7.84	2.38	0.01	0.22. . . .	23.04
% Sand & Silt	-0.02	9.48	2.39	0.01	0.24. . . .	76.70
% Silt & Clay	0.06	2.53	2.13	0.22	0.00*. . .	90.01
% Sand & Clay	0.03	9.12	2.32	0.06	0.05*. . .	32.79

[1] ordinate values range from 0 to 20.

By accepting a value equal to or less than 0.05 as denoting significance, it is possible to summarize the regression analyses in a matrix in which + indicates that the ordinate and abscissa vary directly and –, that they vary inversely (see Table 20).

Table 20: Summary of correlations between biological and physical data indicated by regression analyses. Analyses not run are crossed out.

Ordinates Abscissae

	Depth	% Sand	% Silt	% Clay	% Sand + Silt	% Silt + Clay	% Sand + Clay	Total No.	Mass	No SPP	TVS
Total No.	-		-	+	-	-				+	
Total Mass				-	+					+	
No. SPP.	-	+	-			-					-
TVS		-	+			+	-				

DISCUSSION

Perhaps the most obvious difference between present and previous observations of the condition of the sediment of Bellingham Bay is the apparent lower organic content of the surface deposits of the inner Bay and harbor area. In Whatcom Creek Waterway where Webber (1975) found TVS of surfical sediments to comprise 52%, we observed values of 8.1, 8.7, 9.8, 11.9, and 14.8. Nelson's (1974) range of 12 to 24% TVS in the inner Bay again substantially exceeds ours of 8.1 to 14.8 with only two points of overlap (for the stations near the harbor) and 5.6 to 7.6 (for the rest of the inner Bay). In the outer Bay, Webber (1975) found TVS as high as 11% of total sediment. Our range of 5.5 to 10.0% does not differ substantially from this. The lower organic content of inner Bay sediment probably resulted from many altered management practices (see sediments section of Introduction).

The distribution of sand, silt and clay observed in 1983 corresponds reasonably with prior observations (Sternberg, 1967; Nelson, 1974). Subjective evaluation of such attributes as color and odor are difficult to relate to prior ones. Our observation of "strong" or "obvious" H_2S in or near Whatcom Waterway and Nelson's (1974) "black anaerobic sediments" seem to correspond well (yet one station at the mouth of this waterway had no odor in 1983). The degree to which change has occurred in the harbor area—indeed, even whether it has—is difficult to assess from these subjective criteria.

A comparison of species we encountered in sediment samples (see Table 12) and those previously reported from grab samples (Table 4) is offered in Table 20. There is good correspondence, especially in those species that dominate assemblages. More than half of the species (or other taxa) rated on the lists are common to both. Our list includes 68 forms not previously noted, and this may represent refined taxonomy, or, more likely, increased sampling of the outer Bay. Eighty-two of the entries in Table 4 are not on our species list. That tabulation, however, was made from investigations that included the intertidal zone and hard substrate areas. Such species as *Balanus glandula* and *Hemigrapsus oregonensis*, for example, rarely if ever occur subtidally. *Protothaca staminea* is mainly a mid-intertidal clam of gravelly beaches. *Eudistylia vancouveri* is not usually found in soft sediment. Further, the likelihood of finding these species (and many others) in grabs seems to us to be low.

The assemblages of species we noted also have been observed by others. Nelson (1974) and Webber (1978) found *Owenia fusiformis* dominant in the Squalicum Harbor area and as far west as the Nooksack. Webber found *Tharyx* sp. by far the most numerous species in the harbor and inner Bay. Nelson cited *Capitella* as dominant in waterways and the inner harbor. Whether this apparent difference is the result of changes in the Bay during the past decade is unclear at this time but seems likely. Northwest of Post Point, Nelson found an assemblage dominated by maldanid polychaetes, *Glycinde*, *Axinopsida*, *Yoldia* and *Amphiodia*. In this region, we found a community dominated by *Axinopsida serricata*, *Tharyx* sp., Amphiuridae (family that includes *Amphiodia*), *Tauberia gracilis*, *Glycinde picta*, and other species.

The quantitative aspects of recent and previous investigations are difficult to compare because samples have been taken with different devices, some of which are not standard. If, however, available data are

Table 21: Comparison of grab-caught species previously reported (Table 4) and infaunal macrobenthos sampled in 1983 (Table 11).

Taxon	No. Species		Species in Common[1]	Only in Table 4	Only in Table 12
	Table 4	Table 12			
Cnidaria	3	2	0	3	2
Platyhelminthes	X	X	X		
Nematoda	X	x[3]	x[3]		
Polychaeta	80	89	58	40[2]	31
Oligochaeta	X	x[3]	X		
Gastropoda	13	11	6	7	4
Bivalvia	31	24	17	11[2]	7
Schaphopoda	1	1	0		
Amphipoda	X	16	-		16
Other Crustacea	23	19	12	13[2]	7
Pycnogonida	X	0	0		
Sipuncula	X	X	X		
Priapulida	1	1	1		
Phoronida	X	X	X		
Echinodermata	10	3	2	8	1
Totals	169	169+	98[2]	82[2]	68

1. Named species in one list are equated with generic names only in the other (Capitella sp = Capitella capitata).

2. For reason given in Footnote 1, sums of figures in columns 3 and 4 do not always equal that in Column 1.

3. Present but not identified further and not included in analysis of data.

standardized to number of individuals per 0.1 m^2 (the form in which we reported ours), there is an apparent increase (see below) that almost defies reason—at least, on biological grounds.

In the region we have characterized as the Nooksack delta to Squalicum Harbor, Webber (1978) found 247 to 536 organisms. We found 902 to 13,595. Webber counted 110 to 200 organisms in the Bellingham harbor; we, 80-1,859 (mean of 820.7). Webber reported 30-235 in the inner Bay; we, 190-2,459 (mean of 1,184). Shea et al (1981) reported 20-48 individuals in the vicinity of Post Point (outer Bay). Smith (1974) found 247 in 9 m at Eliza Island and 947 in the same depth at Portage Island (both outer Bay). Our range for the outer Bay was 17-1,005 (mean of 194.7).

In Samish Bay, Smith found 748-786 organisms in 10-16 m depths. We found 157-529 at 15-16 m. Our station L07 (27.4 m) is closest to Smith's Portage Island station (Eliza Island was not sampled in 1983). At L07, we counted 139 and 350 organisms: a mean of 244.5 to compare to Smith's 247.

If the prior data are compared directly to ours, there has been an apparent enormous increase (perhaps 3X) in the fauna (number of organisms) in the delta, a comparable (perhaps even 4X) increase in the harbor and, possibly, an even greater one in the inner Bay. The numbers reported by Shea imply a comparable increase in the outer Bay; those by Smith, do not.

Smith's data for Samish Bay correspond closely to ours.

There are, however, reasons to exercise caution in comparisons. Smith sampled with a diver-operated airlift. Webber and Shea used Van Veen grabs, but Webber sometimes subsampled his. Webber screened to 1 mm; Smith to 2 (see Table 3).

Species assemblages identified in this study are most obvious in qualitative analysis of dominant species (Table 13). When the quantitative parameters of numbers, biomass, or species richness are used in statistical or other quantitative analyses, patterns are less clear. In particular, although numbers, biomass, and species richness did correlate significantly with some of the physical factors measured, the percent of variation accounted for was always quite low, restricting the predictive value of results. Cluster analysis gave unclear results as well, even when only dominant species were used. Thus, even though patterns of qualitative dominance were reasonably clear, the dominant species varied tremendously in their absolute numerical abundance from station to station and within replicates of a given station.

Regression analyses (see Table 20) indicate that the total number of organisms in samples varied directly with the number of species present and with the clay content of the substrate. The number of organisms varied inversely with depth and with the percent of silt. The correlations with depth and silt may be the same: the deeper parts of the Bay also are the siltiest. The inverse relationship between number and silt plus clay (the reciprocal of sand) and silt plus sand (the reciprocal of clay) plus a lower value of R^2 for silt than for clay (Table 16) indicate that the positive correlation with clay is of less predictive value than the negative correlations with silt and depth. A positive correlation between number of individuals and number of species seems of limited value.

The total mass of organisms in the samples varied directly with the number of species and with the percentage of sand plus silt (the reciprocal of clay). As expected, there was an inverse relationship with clay. The correlations of mass with number of species and number of individuals with number of species would be more useful if a comparable relationship between number of individuals and mass were demonstrable, but the analysis did not support that.

The number of species decreased with depth and silt and with organic content of the substrate. A positive correlation of number of species with sand may be simply the reciprocal of this since the sandier stations are also shallower and have lower TVS. Ignoring low values of R^2 for the regression of number of species against both sand and silt plus clay (Table 18), these relationships make ecological sense and have predictive value.

The correlations between organic content of the substrate (Table 19) and particle size distribution support other generalizations based on regression analyses. TVS varied directly with silt (and silt plus clay) and inversely with sand (and sand plus clay). The lack of an identifiable relationship with mixtures of sand and silt is to be expected.

SUMMARY AND CONCLUSIONS

1. The organic content of the surface sediment of inner Bellingham Bay, especially the inner harbor, was substantially lower in 1983 than in 1974 or 1975.

2. The infaunal macrobenthos of Bellingham Bay, especially that of the inner Bay, consisted mainly of the species previously reported to occur there. The dominance of *Capitella capitata*, noted in the waterways and inner harbor in 1974, no longer obtained, nor were maldanid polychaetes, dominant at Post Point in the same year, abundant at the sampled stations in 1983.

3. There were four more-or-less discrete species assemblages in Bellingham Bay. The Nooksack delta supported an assemblage of some 60 species overwhelmingly dominated by the polychaete, *Owenia fusiformis*. This community blended into that of the Bellingham inner harbor in the vicinity of Squalicum Harbor. The inner harbor, however, supported no more than 40 species dominated by a polychaete species of the genus *Tharyx*, but number of individuals, total biomass, and diversity, were low. Inner Bellingham Bay was inhabited by an assemblage of which *Tharyx* sp. was a numerically dominant species. Richness (up to 56 species), number of individuals and biomass were higher than in the harbor. The inner Bay community blended into an assemblage characterized by the bivalve *Axinopsida serricata* in the outer Bay. The outer Bay had more species (numerical dominance is shared by more forms resulting in higher diversity) than occurred in the inner. Number of species, individuals, biomass, and diversity showed an apparent increase on a

north-south gradient throughout the Bay, but number of individuals and biomass were highest in the low diversity delta.

4. The number of organisms per unit of bottom area encountered in 1983 was very substantially higher than that previously reported for Bellingham Bay. The magnitude of this apparent change, especially when the differences in collection and treatment techniques employed is considered, argues for reasonable caution in interpretation, but is consistent with a generally positive view of the effectiveness of management procedures by public and private agencies during the last decade.
5. Statistical analyses of the data generally were disappointing because of the limited number of data points per station. Direct relationships between organic content and the proportion of silt in the sediment, the species richness and the proportions of sand, and the number of species and mass and number of individuals were demonstrable. Of less predictive value were direct relationships between the number of individuals and the number of species and the number of individuals and the proportion of clay in the sediment. An indirect relationship between the number of species and the organic content of the substrate is considered important, although the probability that any of these apparent correlations may be due to chance is fairly substantial.
6. The infauna of Bellingham and Samish Bays were qualitatively different.

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APPENDIX 1

Number and dry-blotted biomass of infaunal macrobenthos obtained in two replicate 0.1 m^2 Van Veen grab samples at 20 stations in Bellingham Bay and two stations in Samish Bay in May and October, 1983. In columns headed (D) species that account for either 10% of the total number of individuals or of the total biomass are noted by the Figure 1.

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Appendix

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
PACHYCERIANTHUS FIMBRIATA	L04	23.8	1.0	1		1		.852	.7130	1	.9910	1
	L05	18.3	1.0			2		.625			1.2510	1
	L07	27.4	1.0	1		1		7.612	8.1250	1	7.1000	1
	L10	27.4	1.5	1		2		.703	.0280		1.3780	
	L11	25.6	1.5	1		2		2.584	.6820		4.4360	1
	L12	23.8	.5	1				1.701	3.4030	1		
TOTALS:			6.5	5		8		14.078	12.9510		15.2060	
HALCAMPA DECEMTENTACULATA	E01	5.7	1.5	1		2		.231	.0640		.3990	
	E02	7.9	.5			1		.310			.6210	
	E09	13.6	.5			1		.022			.0450	
	E11	14.8	.5			1		.155			.3110	
	E12	16.1	.5	1				.004	.0080			
	L01	7.6	.5	1				.019	.0370			
TOTALS:			4.0	3		5		.742	.1090		1.3760	
PLATYHELMINTHES	E11	14.8	.5	1				.003	.0070			
	L01	7.6	3.0	2		4		.012	.0070		.0170	
	L02	10.7	1.5	3				.004	.0090			
	L03	14.6	2.0	3		1		.008	.0150		.0010	
TOTALS:			7.0	9		5		.028	.0380		.0180	
NEMERTEA	E01	5.7	4.0	4		4		.064	.0570		.0710	
	E02	7.9	4.0	5		3		.050	.0330		.0670	
	E03	4.5	1.0	1		1		.010	.0180		.0020	
	E06	12.3	4.0	2		6		.052	.0370		.0670	
	E08	13.6	2.5	2		3		.020	.0070		.0340	
	E09	13.6	5.0	6		4		.181	.0570		.3060	
	E11	14.8	1.5			3		.854			1.7080	
	E12	16.1	.5			1		.014			.0290	
	L01	7.6	7.0	8		6		.074	.0380		.1100	
	L02	10.7	3.5	1		6		.369	.0230		.7160	
	L03	14.6	1.0	1		1		.007	.0120		.0030	
	L04	23.8	3.0	3		3		.279	.5260	1	.0320	
	L05	18.3	1.0	1		1		.001	.0004		.0010	
	L06	21.9	.5	1				.004	.0090			
	L07	27.4	1.5	1		2		2.186	3.3400	1	1.0320	
	L09	29.2	.5	1				.026	.0520			
	L11	25.6	.5	1				.003	.0070			
	L12	23.8	1.0	1		1		.180	.3600		.0004	

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

3.2)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
TOTALS:			42.0	39		45		4.277	4.5764		4.1774	
CEREBRATULUS SP.	L10	27.4	1.0			2		3.821			7.6430	1
	L12	23.8	.5			1		.293			.5870	
TOTALS:			1.5			3		4.115			8.2300	
EUNOE UNISERIATA	E09	13.6	.5	1				.001	.0020			
	L11	25.6	.5			1		.011			.0220	
	L12	23.8	.5	1				.022	.0450			
TOTALS:			1.5	2		1		.034	.0470		.0220	
HARMOTHOE IMBRICATA	E01	5.7	1.0			2		.002			.0040	
TOTALS:			1.0			2		.002			.0040	
HARMOTHOE LUNULATA	E11	14.8	.5	1				.005	.0110			
	L04	23.8	1.0	1		1		.002	.0020		.0030	
	L09	27.4	.5	1				.005	.0110			
TOTALS:			2.0	3		1		.013	.0240		.0030	
POLYEUNOA TUTA	E02	7.9	.5			1		.003			.0060	
	L03	14.6	.5	1				.085	.1710			
TOTALS:			1.0	1		1		.088	.1710		.0060	
TENONIA KITSAPENSIS	E01	5.7	.5			1		.003			.0070	
	L01	7.6	4.0	3		5		.003	.0030		.0040	
	L02	10.7	2.5	3		2		.003	.0040		.0030	
	L03	14.6	1.5	3				.003	.0070			
	L08	29.2	.5	1				.000	.0010			
	L10	27.4	.5			1		.001			.0020	
TOTALS:			9.5	10		9		.015	.0150		.0160	
PHOLOE MINUTA	E01	5.7	3.0	4		2		.015	.0270		.0040	
	E03	4.5	1.5	1		2		.004	.0030		.0050	
	E06	12.3	9.0	9		9		.011	.0110		.0120	
	E08	13.6	1.0	2				.000	.0010			
	E09	13.6	4.5	4		5		.004	.0030		.0060	
	E11	14.8	4.5	5		4		.012	.0090		.0160	
	E12	16.1	1.0	1		1		.004	.0050		.0040	

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

3(?)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 (C) COUNT SEE B	REP 2 (C) COUNT	MEAN WEIGHT G/0.1M2	REP 1 (D) WEIGHT (SEE C)	REP 2 (D) WEIGHT
	L01	7.6	8.0	9	7	.021	.0330	.0090
	L02	10.7	1.5	1	2	.003	.0020	.0050
	L03	14.6	3.0	3	3	.013	.0170	.0090
	L04	23.8	.5		1	.001		.0020
	L07	27.4	.5		1	.000		.0010
	L09	27.4	.5	1		.001	.0020	
	L10	27.4	.5		1	.001		.0020
	L12	23.8	.5		1	.001		.0030
TOTALS:			39.5	40	39	.095	.1130	.0780
STHENELAIS TERTIAGLABRA	E11	14.8	.5		1	.029		.0590
TOTALS:			.5		1	.029		.0590
ANAITIDES MUCOSA	L07	27.4	.5	1		.221	.4420	
TOTALS:			.5	1		.221	.4420	
ANAITIDES MACULATA	E08	13.6	1.0		2	.006		.0120
	E12	16.1	1.0	2		.004	.0090	
	L10	27.4	.5	1		.344	.6880	
TOTALS:			2.5	3	2	.354	.6970	.0120
ANAITIDES MULTISERIATA	E12	16.1	.5	1		.003	.0070	
TOTALS:			.5	1		.003	.0070	
ETEONE PACIFICA	E03	4.5	1.0		2	.002		.0050
TOTALS:			1.0		2	.002		.0050
ETEONE LONGA	E01	5.7	3.5	3	4	.018	.0140	.0220
	E02	7.9	3.5	5	2	.005	.0090	.0010
	E03	4.5	14.5	13	16	.031	.0240	.0380
	E04	11.5	.5	1		.001	.0020	
	E06	12.3	44.0	48	40	.104	.0160	.1930
	E08	13.6	15.5	21	10	.063	.0870	.0400
	E09	13.6	2.5	1	4	.004	.0010	.0080
	E11	14.8	1.0		2	.001		.0020
	L01	7.6	6.5	10	3	.003	.0050	.0020
	L02	10.7	1.5	1	2	.005	.0040	.0060
	L03	14.6	1.0	1	1	.003	.0010	.0050

A: E05 AND E10 NOT PROCESSED.

B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL THE TOTAL COUNT OR WEIGHT IN A REPLICATE.

C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

3(4)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 (D) COUNT SEE B	REP 2 (D) COUNT	MEAN WEIGHT G/0.1M2	REP 1 (D) WEIGHT (SEE C)	REP 2 (D) WEIGHT
	L04	23.8	.5	1		.000	.0004	
TOTALS:			54.5	105	4	.240	.1634	.3170
EULALIA SP.	E01	5.7	.5		1	.007		.0140
	L01	7.6	.5	1		.000	.0010	
TOTALS:			1.0	1	1	.007	.0010	.0140
EULALIA NIGRIMACULATA	E08	13.6	1.5		3	.004		.0090
	L01	7.6	.5		1	.001		.0020
TOTALS:			2.0		4	.005		.0110
> GYPTIS BREVIPALPA	E03	4.5	.5	1		.000	.0004	
	E04	11.5	1.5	1	2	.002	.0010	.0030
	E06	12.3	2.0	4		.008	.0170	
	E08	13.6	1.0	2		.000	.0010	
	E09	13.6	1.0	2		.000	.0010	
	L01	7.6	2.0	1	3	.009	.0110	.0070
	L03	14.6	2.5	5		.001	.0030	
	L04	23.8	.5	1		.002	.0040	
	L05	18.3	1.0		2	.000		.0004
	L08	29.2	.5		1	.000		.0010
	L09	27.4	.5		1	.000		.0010
	L11	25.6	.5	1		.000	.0010	
TOTALS:			13.5	18	9	.026	.0394	.0124
> OPHIODROMUS PUGETTENSIS	E01	5.7	2.0	2	2	.043	.0560	.0310
	E02	7.9	5.5	7	4	.055	.0710	.0390
	E03	4.5	31.5	46	17	.189	.3080	.0710
	E04	11.5	2.5	3	2	.008	.0040	.0130
	E06	12.3	11.5	6	17	.046	.0200	.0720
	E08	13.6	4.0	7	1	.034	.0590	.0090
	E09	13.6	.5		1	.000		.0010
	E11	14.8	2.0		4	.005		.0100
	L01	7.6	.5	1		.004	.0080	
	L02	10.7	1.0		2	.002		.0050
	L04	23.8	1.0		2	.000		.0010
	L08	29.2	.5	1		.000	.0004	
	L09	27.4	1.0	2		.001	.0030	
TOTALS:			63.5	75	52	.391	.5294	.2520

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

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               BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
          COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

   TAXON                      STA- DEPTH    MEAN REP 1 (D) REP 2 (D)    MEAN   REP 1 (D)   REP 2 (D)
                              TION  (M)    COUNT COUNT       COUNT     WEIGHT  WEIGHT      WEIGHT
                                          #/0.1M2 SEE B               G/0.1M2 (SEE C)

PILARGIS BERKELEYAE           E11  14.8      .5                1        .004                .0090
                 TOTALS:                     .5                1        .004                .0090
NEREIS SP.                    E01   5.7      .5                1        .003                .0060
                              E03   4.5      .5    1                    .000    .0004
                 TOTALS:                    1.0    1           1        .003    .0004       .0060
NEREIS BRANDTI                E06  12.3      .5    1                   3.184   6.3680   1
                 TOTALS:                     .5    1                   3.184   6.3680
NEREIS PROCERA                E06  12.3      .5    1                    .001    .0020
                              E08  13.6     1.5    2           1        .012    .0210       .0030
                              E11  14.8      .5                1        .016                .0320
                              L03  14.6      .5                1        .024                .0490
                              L05  19.3     2.5    4           1        .101    .1600   1   .0430
                              L06  21.9     2.5    3   1       2        .024    .0320       .0160
                              L07  27.4      .5                1        .002                .0050
                              L11  25.6      .5    1                    .040    .0800
                 TOTALS:                    9.0   11           7        .221    .2950       .1480
PLATYNEREIS BICANALICULAT     L01   7.6      .5    1                    .005    .0110
                 TOTALS:                     .5    1                    .005    .0110
NEPHTYS LONGOSETOSA           E01   5.7     1.5    1           2        .001    .0004       .0010
                              E02   7.9    27.5   34          21        .033    .0380       .0280
                              E03   4.5     8.0   13           3        .021    .0400       .0020
                              E04  11.5     6.5    4           9        .014    .0130       .0160
                              E06  12.3     9.0   12           6        .005    .0090       .0020
                              E07  11.3      .5                1        .001                .0030
                              E08  13.6      .5    1                    .000    .0010
                              E09  13.6     2.5    3           2        .001    .0020       .0010
                              E12  16.1     1.0    1           1        .004    .0030       .0050
                              L01   7.6     3.0                6        .002                .0040
                              L03  14.6     1.0    1           1        .001    .0020       .0010
                              L04  23.8      .5    1                    .000    .0004
                              L05  18.3     1.0                2        .000                .0010
                              L06  21.9     1.5                3        .000                .0010
                              L07  27.4      .5                1        .000                .0004
                             A: E05 AND E10 NOT PROCESSED.
                             B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT
                                TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
                                A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
                                THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
                             C: 0.0004 G INDICATES WEIGHT LESS THAN 0.0010. FOR MEAN VALUES THIS
                                IS ROUNDED AND REPORTED AS 0.000 G.
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
	LC8	29.2	1.5	3				.004	.0090			
	LC9	27.4	.5			1		.000			.0010	
	L10	27.4	.5			1		.003			.0050	
	L11	25.6	1.0	2				.003	.0070			
	L12	23.8	1.0	2				.134	.2690			
TOTALS:			69.0	79		60		.232	.3918		.0724	
NEPHTYS FERRUGINEA	E08	13.6	.5			1		2.311			4.6230	1
	L06	21.9	.5			1		.002			.0050	
	LC7	27.4	.5	1				.010	.0200			
	L12	23.8	.5	1				.006	.0120			
TOTALS:			2.0	2		2		2.330	.0320		4.6270	
GLYCERA CAPITATA	E06	12.3	.5			1		.001			.0030	
	E09	13.6	.5			1		.159			.3190	
	E11	14.8	.5			1		.060			.1200	
	LC7	27.4	1.0	1		1		.160	.2910		.0290	
TOTALS:			2.5	1		4		.381	.2910		.4710	
HEMIPODUS BOREALIS	LC4	23.8	.5			1		.042			.0850	
	LC5	18.3	.5	1				.016	.0330			
	LC8	29.2	2.0	2		2		.204	.2170		.1920	
	LC9	27.4	1.0	1		1		.163	.0160		.3100	1
	L10	27.4	.5	1				.002	.0040			
	L11	25.6	.5	1				.138	.2770			
TOTALS:			5.0	6		4		.567	.5470		.5870	
GLYCINDE PICTA	E01	5.7	19.0	15		23		.216	.1490		.2840	
	E02	7.9	46.5	53		40		.934	1.0700	1	.7980	
	E03	4.5	43.0	54		32		.735	1.0090		.4610	
	E04	11.5	13.0	16		10		.363	.2760		.3510	
	E06	12.3	55.5	66		45		.694	.6400		.7490	1
	E07	11.3	3.0	5		1		.080	.1580		.0020	
	E08	13.6	25.0	33		17		.217	.2540		.1810	
	E09	13.6	25.0	25	1	25		.563	.6770	1	.4490	1
	E11	14.8	1.5	2		1		.025	.0300		.0210	
	E12	16.1	2.0	2		2		.276	.1530		.3990	1
	LC1	7.6	35.0	21		49		.276	.0950		.4570	
	LC2	10.7	6.5	7		6		.123	.1860		.0600	
	L03	14.6	7.5	14		1		.329	.6550		.0030	

A: E05 AND E10 NOT PROCESSED.
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STATION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
	L04	23.8	3.0	3		3		.223	.0920		.3550	
	L05	18.3	4.0	2		6		.250	.1230	1	.3770	1
	L06	21.9	3.5	1		6	1	.142	.0140		.2710	1
	L08	29.2	1.5	1		2		.217	.1650		.2700	
	L10	27.4	1.0	2				.015	.0300			
	L11	25.6	2.0	1		3		.036	.0190		.0530	
	L12	23.8	.5			1		.012			.0250	
TOTALS:			298.0	323		273		5.730	5.8950		5.5660	
GLYCINDE ARMIGERA	L07	27.4	.5			1		.048			.0970	
TOTALS:			.5			1		.048			.0970	
GONIADA MACULATA	E11	14.8	1.0			2		.117			.2350	
TOTALS:			1.0			2		.117			.2350	
GONIADA BRUNNEA	L06	21.9	.5	1				.141	.2820	1		
	L07	27.4	2.5	2		3		.475	.4030		.5480	
	L09	27.4	1.0			2		.141			.2830	1
	L12	23.8	.5	1				.513	1.0270			
TOTALS:			4.5	4		5		1.271	1.7120		.8310	
ONUPHIS SP.	L01	7.6	1.0	2				.000	.0004			
TOTALS:			1.0	2				.000	.0004			
ONUPHIS IRIDESCENS	E08	13.6	.5			1		.004			.0090	
	E11	14.8	.5			1		.471			.9420	
TOTALS:			1.0			2		.475			.9510	
LUMBRINERIS SP.	E01	5.7	21.0	18		24		.394	.2950		.4940	
	E02	7.9	.5	1				.009	.0190			
	E03	4.5	4.0	7		1		.012	.0230		.0010	
	E06	12.3	6.5	2		11		.050	.0270		.0740	
	E08	13.6	2.5	4		1		.011	.0160		.0060	
	E09	13.6	1.0	1		1		.001	.0010		.0010	
	E11	14.8	12.5	8		17		.110	.1060		.1140	
	E12	16.1	6.5	6		7		.040	.0250		.0560	
	L01	7.6	5.0	2		8		.026	.0020		.0500	
	L02	10.7	5.0	6		4		.081	.0840		.0790	

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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
	L03	14.6	1.0	1		1		.010	.0180		.0020	
	L04	23.8	.5	1				.003	.0060			
	L06	21.9	.5			1		.008			.0160	
	L07	27.4	1.5			3		.007			.0140	
	L08	29.2	.5	1				.004	.0080			
	L10	27.4	5.0	7		3		.044	.0690		.0190	
	L11	25.6	1.0			2		.031			.0620	
	L12	23.8	1.0	2				1.033	2.0660			
TOTALS:			75.5	47		94		1.877	2.7650		.5890	
LUMBRINERIS BICIRRATA	L02	10.7	1.0	2				1.375	2.7500			
TOTALS:			1.0	2				1.375	2.7500			
DORVILLEA SP.	E01	5.7	5.5	4		7		.029	.0220		.0370	
	E02	7.9	6.5	8		5		.017	.0230		.0110	
	E04	11.5	10.0	8		12		.031	.0150		.0470	
	F06	12.3	1.5			3		.005			.0100	
	F07	11.3	.5	1				.000	.0010			
	L03	14.6	5.5	11				.019	.0380			
	L04	23.8	2.5			5		.011			.0230	
	L09	27.4	1.0	2				.006	.0130			
TOTALS:			33.0	34		32		.120	.1120		.1290	
DORVILLEA ANNULATA	F03	4.5	508.5	541	1	476	1	1.021	1.1150		.9270	
	F06	12.3	2.0	4				.007	.0150			
	L01	7.6	4.0			8		.005			.0110	
	L11	25.6	.5			1		.014			.0280	
	L12	23.8	.5			1		.003			.0070	
TOTALS:			515.5	545		486		1.051	1.1300		.9730	
SCOLOPLOS PUGETTENSIS	F11	14.8	1.5			3		.023			.0460	
TOTALS:			1.5			3		.023			.0460	
ARICIDEA SP.	E02	7.9	.5	1				.000	.0004			
TOTALS:			.5	1				.000	.0004			
ARICIDEA LOPEZI	L04	23.8	.5	1				.000	.0004			
	L07	27.4	.5			1		.001			.0020	

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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
	LC8	29.2	.5	1				.000	.0004			
	L10	27.4	3.0	2		4		.006	.0020		.0100	
	L11	25.6	6.0	6		6		.004	.0030		.0050	
	L12	23.8	.5			1		.000			.0004	
TOTALS:			11.0	10		12		.012	.0058		.0174	
TAUBERIA GRACILIS	E06	12.3	.5	1				.000	.0004			
	E11	14.6	7.5			15		.001			.0030	
	E12	15.1	2.0	2		2		.001	.0010		.0010	
	LC4	23.8	16.5	28	1	5		.003	.0050		.0010	
	LC5	18.3	1.5	1		2		.000	.0004		.0004	
	LC6	21.9	5.5	1		10	1	.002	.0004		.0030	
	LC7	27.4	11.5	10		13		.002	.0020		.0020	
	LC8	29.2	6.0	6		6		.003	.0040		.0020	
	LC9	27.4	3.0	3		3		.001	.0010		.0010	
	L10	27.4	28.0	29		27	1	.024	.0290		.0200	
	L11	25.6	30.5	28		33	1	.017	.0150		.0190	
	L12	23.8	15.0	13		17		.004	.0040		.0050	
TOTALS:			127.5	122		133		.060	.0622		.0574	
LAONICE CIRRATA	EC1	5.7	3.0	3		3		.204	.2940		.1150	
	E11	14.6	3.5	2		5		.242	.2340		.2510	
	LC7	27.4	.5			1		.003			.0060	
	LC8	29.2	1.0	1		1		.600	.1820		1.0190	
	LC9	27.4	.5	1				.167	.3340	1		
	L10	27.4	.5			1		.220			.4400	
TOTALS:			9.0	7		11		1.437	1.0440		1.8310	
POLYDORA SOCIALIS	EC3	4.5	3.0	5		1		.004	.0070		.0010	
	E08	13.6	1.0			2		.005			.0100	
	LC2	10.7	.5			1		.000			.0010	
TOTALS:			4.5	5		4		.009	.0070		.0120	
POLYDORA CARDALIA	EC1	5.7	1.5	1		2		.018	.0050		.0310	
	E08	13.6	2.5	2		3		.055	.0400		.0700	
	EC9	13.6	.5			1		.021			.0430	
	L01	7.6	.5	1				.022	.0440			
TOTALS:			5.0	4		6		.116	.0890		.1440	

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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STATION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 (D) COUNT SEE B	REP 2 (D) COUNT	MEAN WEIGHT G/0.1M2	REP 1 (D) WEIGHT (SEE C)	REP 2 (D) WEIGHT
PRIONOSPIO CIRRIFERA	E02	7.9	1.0		2	.000		.0004
	E03	4.9	5.0		10	.005		.0100
	E11	14.8	1.5	1	2	.001	.0020	.0010
	E12	16.1	4.0		8	.002		.0040
	L01	7.6	1.0		2	.000		.0004
	L03	14.6	.5	1		.000	.0010	
	L07	27.4	1.5	3		.000	.0004	
	L10	27.4	.5		1	.000		.0004
	L11	25.6	1.0	1	1	.000	.0004	.0004
	L12	23.8	1.0	1	1	.000	.0004	.0004
TOTALS:			17.0	7	27	.011	.0042	.0170
PRIONOSPIO STEENSTRUPI	E01	5.7	2.5	1	4	.002	.0010	.0030
	E06	12.3	1.5	1	2	.001	.0010	.0004
	E09	13.6	.5		1	.000		.0010
	E11	14.8	1.0	2		.001	.0020	
	E12	16.1	1.0	2		.000	.0010	
	L01	7.6	1.0	1	1	.001	.0010	.0004
	L02	10.7	.5		1	.000		.0010
	L08	29.2	.5	1		.000	.0004	
TOTALS:			8.5	8	9	.006	.0064	.0058
POLYDORA PROBOSCIDEA	L02	10.7	.5	1		.014	.0280	
	L03	14.6	.5	1		.085	.1700	
TOTALS:			1.0	2		.099	.1980	
SPIOPHANES SP.	L01	7.6	.5	1		.000	.0004	
	L11	25.6	1.0	2		.001	.0030	
TOTALS:			1.5	3		.002	.0034	
SPIOPHANES BERKELEYORUM	E01	5.7	.5	1		.001	.0020	
	E09	13.6	1.0	2		.000	.0010	
	E11	14.8	.5		1	.000		.0004
	L01	7.6	.5		1	.021		.0430
	L02	10.7	.5	1		.000	.0004	
	L03	14.6	3.5	4	3	.064	.0510	.0770
	L04	23.8	.5		1	.003		.0070
	L05	13.3	.5		1	.014		.0290
	L07	27.4	.5	1		.001	.0020	

A: E05 AND E10 NOT PROCESSED.
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 (D) COUNT SEE B	REP 2 (D) COUNT	MEAN WEIGHT G/0.1M2	REP 1 (D) WEIGHT (SEE C)	REP 2 (D) WEIGHT
	L10	27.4	1.0		2	.022		.0450
	L12	23.8	.5		1	.002		.0040
TOTALS:			9.5	9	10	.130	.0564	.2044
PARAPRIONOSPIO PINNATA	E01	5.7	2.5	1	4	.209	.0820	.3370
	E02	7.9	3.0	3	3	.101	.0550	.1480
	E04	11.5	1.5	3		.055	.1110	
	E06	12.3	4.0	7	1	.112	.2120	.0120
	E07	11.3	.5	1		.001	.0030	
	E09	13.6	1.5	2	1	.006	.0110	.0004
	E11	14.8	3.0	1	5	.219	.0840	.3540
	E12	16.1	1.0		2	.132		.2640
	L01	7.6	5.0	7	3	.152	.2840	.0210
	L02	10.7	1.5	1	2	.075	.0010	.1500
	L03	14.6	.5		1	.001		.0030
	L04	23.8	1.0	1	1	.051	.0020	.1000
	L05	18.3	.5		1	.050		.1010
	L06	21.9	1.0	1	1	.023	.0440	.0020
	L07	27.4	2.5	2	3	.111	.1320	.0910
	L08	29.2	2.0	2	2	.155	.2790	.0320
	L10	27.4	4.0	2	6	.189	.0300	.3480
	L11	25.6	4.0	5	3	.107	.0120	.2030
	L12	23.8	2.5	4	1	.147	.2280	.0670
TOTALS:			41.5	43	40	1.902	1.5700	2.2334
MAGELONA SP.	E11	14.8	4.5		9	.031		.0620
TOTALS:			4.5		9	.031		.0620
TROCHOCHAETA MULTISETOSA	E01	5.7	.5		1	.024		.0480
	L02	10.7	.5	1		.002	.0040	
TOTALS:			1.0	1	1	.026	.0040	.0480
CIRRATULUS CIRRATUS	E01	5.7	40.5	25	56	.264	.0950	.4330
	E02	7.9	8.5	10	7	.014	.0150	.0140
	E06	12.3	15.5	22	9	.011	.0190	.0050
	E09	13.6	.5	1		.000	.0010	
	L01	7.6	1.0	2		.008	.0160	
	L03	14.6	.5	1		.001	.0030	
	L07	27.4	.5	1		.001	.0020	
	L11	25.6	.5	1		.002	.0050	

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT
TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
IS ROUNDED AND REPORTED AS 0.000 G.

3(12)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON		STA- TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
	TOTALS:			67.5	63		72		.304	.1550		.4520	
THARYX SP.		E01	5.7	98.0	101		95		.314	.5320		.0960	
		E02	7.9	657.0	899	1	415	1	3.871	4.4580	1	3.2850	1
		E03	4.5	1036.0	976	1	1096	1	1.805	1.9390	1	1.6720	
		E04	11.5	408.0	501	1	315	1	1.743	1.9130	1	1.5740	1
		E06	12.3	1466.0	1270	1	1662	1	3.281	2.8390	1	3.7240	1
		E07	11.3	153.5	233	1	74	1	.961	1.6030	1	.3200	1
		E08	13.6	1595.0	1920	1	1270	1	2.400	2.4620	1	2.3380	1
		E09	13.6	12.0	3		21		.011	.0050		.0180	
		E11	14.8	2.0	1		3		.007	.0010		.0140	
		L01	7.6	809.5	836	1	783		1.545	1.4020	1	1.6890	1
		L02	10.7	379.0	310	1	448	1	1.601	1.3030		1.9000	
		L03	14.6	448.0	295	1	601	1	1.561	1.1350		1.9870	1
		L04	23.8	85.5	96	1	75	1	.250	.1950		.3060	
		L05	18.3	37.5	27	1	48	1	.171	.1450	1	.1980	
		L06	21.9	1.5			3		.004			.0080	
		L07	27.4	18.0	10		26		.045	.0290		.0620	
		L08	29.2	1.0	1		1		.001	.0020		.0010	
		L09	27.4	.5			1		.002			.0050	
		L10	27.4	.5			1		.001			.0020	
		L11	25.6	.5			1		.001			.0030	
	TOTALS:			7209.0	7479		6939		19.582	19.9630		19.2020	
CHAETOZONE SP.		E06	12.3	.5	1				.000	.0004			
	TOTALS:			.5	1				.000	.0004			
CHAETOZONE SETOSA		L10	27.4	1.0	2				.004	.0090			
	TOTALS:			1.0	2				.004	.0090			
COSSURA SOYERI		E03	4.5	17.5	7		28		.001	.0004		.0020	
		E08	13.6	.5	1				.000	.0004			
		L01	7.6	2.0			4		.000			.0010	
		L07	27.4	1.0			2		.000			.0004	
		L11	25.6	.5			1		.000			.0004	
	TOTALS:			21.5	8		35		.002	.0008		.0038	
PHERUSA PLUMOSA		L04	23.8	.5	1				.037	.0740			

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

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                 BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
             COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

   TAXON                      STA-  DEPTH     MEAN  REP 1  (D)  REP 2  (D)     MEAN    REP 1  (D)     REP 2  (D)
                              TION   (M)     COUNT  COUNT          COUNT       WEIGHT  WEIGHT         WEIGHT
                                            #/0.1M2 SEE B                    G/0.1M2  (SEE C)

                TOTALS:                         .5     1                       .037    .0740

SCALIBREGMA INFLATUM          E04   11.5        .5                 1           .013                   .0260
                              E11   14.8        .5                 1           .001                   .0020
                              E12   16.1        .5     1                       .003    .0070

                TOTALS:                        1.5     1           2           .017    .0070          .0280

AMMOTRYPANE AULOGASTER        E11   14.8        .5                 1           .082                   .1640

                TOTALS:                         .5                 1           .082                   .1640

ARMANDIA BREVIS               E02    7.9      21.5    20          23           .101    .1170          .3850
                              E04   11.5        .5                 1           .002                   .0050
                              E12   16.1       7.0    12           2           .009    .0130          .0050
                              L03   14.6        .5     1                       .000    .0004
                              L10   27.4        .5     1                       .000    .0004
                              L12   23.8        .5                 1           .001                   .0020

                TOTALS:                       30.5    34          27           .114    .1309          .3970

TRAVISIA PUPA                 L12   23.8       3.0     1           5          4.306   2.0920         6.5210   1

                TOTALS:                        3.0     1           5          4.306   2.0920         6.5210

STERNASPIS SCUTATA            E11   14.8       1.0                 2           .153                   .3060
                              L03   14.6        .5     1                       .001    .0020
                              L04   23.8       1.0     2                       .052    .1040
                              L07   27.4        .5                 1           .056                   .1120
                              L08   29.2       1.0     2                       .178    .3570
                              L10   27.4       2.5     2           3           .437    .3130          .5620
                              L11   25.6       9.0    12           6          1.718   2.0180         1.4180   1
                              L12   23.8       1.0                 2           .112                   .2240

                TOTALS:                       16.5    19          14          2.708   2.7940         2.6220

CAPITELLA SP.                 E01    5.7       1.0                 2           .000                   .0010
                              E03    4.5       1.5     1           2           .001    .0010          .0004
                              E04   11.5        .5                 1           .000                   .0004
                              E06   12.3      11.5    10          13           .003    .0030          .0040
                              E08   13.6       2.0     2           2           .001    .0010          .0020
                              L01    7.6        .5                 1           .000                   .0004

                TOTALS:                       17.0    13          21           .007    .0050          .0082

                              A: E05 AND E10 NOT PROCESSED.
                              B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT
                                 TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
                                 A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
                                 THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
                              C: 0.0004 G INDICATES WEIGHT LESS THAN 0.0010. FOR MEAN VALUES THIS
                                 IS ROUNDED AND REPORTED AS 0.000 G.
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
HETEROMASTUS FILIFORMIS	F01	5.7	.5	1				.001	.0020			
	F08	13.6	1.0			2		.005			.0100	
	E11	14.8	4.5			9		.002			.0040	
	L10	27.4	1.0			2		.008			.0170	
TOTALS:			7.0	1		13		.016	.0020		.0310	
HETEROMASTUS FILOBRANCHUS	F01	5.7	.5	1				.002	.0050			
	E02	7.9	3.5	7				.155	.3100			
	F06	12.3	1.5	2		1		.336	.4850		.1870	
	E08	13.6	2.5	2		3		.034	.0550		.0140	
	F09	13.6	1.5	1		2		.353	.6910	1	.0150	
	L01	7.6	5.5	5		6		.037	.0510		.0240	
	L02	10.7	.5			1		.000			.0004	
	L03	14.6	1.0	2				.012	.0250			
	L04	23.8	2.5	4		1		.005	.0090		.0020	
	L05	18.3	4.0	1		7		.483	.2520	1	.7140	1
	L06	21.9	1.0			2		.037			.0750	1
	L07	27.4	.5	1				.012	.0240			
	L11	25.6	1.0			2		.002			.0040	
	L12	23.8	.5	1				.056	.1130			
TOTALS:			26.0	27		25		1.527	2.0190		1.0354	
MEDIOMASTUS SP.	E11	14.8	1.0	2				.000	.0010			
TOTALS:			1.0	2				.000	.0010			
MEDIOMASTUS CALIFORNIENSI	E01	5.7	14.5	10		19		.078	.0690		.0880	
	F02	7.9	1.0			2		.161			.3230	
	E03	4.5	6.5	6		7		.002	.0030		.0010	
	F06	12.3	1.0			2		.000			.0010	
	F09	13.6	.5	1				.000	.0004			
	L01	7.6	.5			1		.000			.0010	
	L07	27.4	.5			1		.000			.0004	
	L11	25.6	.5	1				.001	.0030			
TOTALS:			25.0	18		32		.245	.0754		.4144	
PARAONELLA AMERICANA	F11	14.8	.5			1		.034			.0680	
TOTALS:			.5			1		.034			.0680	

A: E05 AND E10 NOT PROCESSED.
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C: 0.0004 G INDICATES WEIGHT LESS THAN 0.0010. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
MALDANE GLEBIFLEX	E01	5.7	1.0	2				.005	.0110			
	E11	14.8	.5	1				.001	.0020			
	L02	10.7	.5	1				.007	.0150			
TOTALS:			2.0	4				.014	.0290			
PRAXILLELLA GRACILIS	E01	5.7	3.0	2		4		.118	.0200		.2160	
TOTALS:			3.0	2		4		.118	.0200		.2160	
PRAXILLELLA AFFINIS	E06	12.3	.5	1				.000	.0004			
	E09	13.6	.5			1		.000			.0004	
	E11	14.8	4.5			9		1.010			2.0210	
	L10	27.4	.5	1				.002	.0040			
	L11	25.6	3.0	6				.031	.0620			
TOTALS:			9.0	8		10		1.044	.0664		2.0214	
EUCLYMENE ZONALIS	L02	10.7	.5			1		.000			.0004	
TOTALS:			.5			1		.000			.0004	
EUCLYMENINAE	E01	5.7	3.5	1		6		.011	.0010		.0220	
	E03	4.5	.5	1				.000	.0004			
	E06	12.3	1.5			3		.000			.0004	
	E08	13.6	5.5	5		6		.014	.0040		.0250	
	E09	13.6	.5			1		.000			.0004	
	L01	7.6	.5	1				.001	.0020			
	L02	10.7	5.0	3		7		.107	.0560		.1590	
	L11	25.6	.5			1		.003			.0070	
TOTALS:			17.5	11		24		.139	.0634		.2138	
OWENIA FUSIFORMIS	E01	5.7	1038.0	895	1	1181	1	7.271	6.6330	1	7.9090	1
	E02	7.9	.5	1				.003	.0060			
	E03	4.5	10.5	14		7		.046	.0660		.0270	
	E06	12.3	4.5	8		1		.001	.0010		.0004	
	E08	13.6	40.5	61		20		.068	.1020		.0350	
	E11	14.8	31.0	31		31		.139	.0540		.2250	
	E12	16.1	2.0	2		2		.010	.0100		.0110	
	L01	7.6	7705.5	2826	1	12585	1	8.309	5.6560	1	10.9630	1
	L02	10.7	463.0	324	1	602	1	.191	.1000		.2820	
	L03	14.6	1.5	3				.001	.0020			

A: E05 AND E10 NOT PROCESSED.
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A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
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3(7)

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                    BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
              COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

    TAXON                        STA-  DEPTH     MEAN  REP 1 (D)  REP 2 (D)     MEAN    REP 1 (D)    REP 2 (D)
                                 TION   (M)     COUNT  COUNT        COUNT      WEIGHT   WEIGHT       WEIGHT
                                               #/0.1M2 SEE B                  G/0.1M2  (SEE C)

               TOTALS:                         9297.0  4165         14429     16.041  12.6300      19.4524

PECTINARIA GRANULATA             E01    5.7      1.0     1            1        .008    .0020        .0140
                                 E03    4.5       .5                  1        .003                 .0060
                                 E06   12.3      1.0                  2        .013                 .0260
                                 E08   13.6      1.5     2            1        .050    .0910        .0090
                                 E09   13.6      1.0     1            1        .001    .0004        .0020
                                 E11   14.8       .5                  1        .000                 .0010
                                 L01    7.6      3.0     5            1        .031    .0610        .0010
                                 L02   10.7      1.0     2                     .001    .0020
                                 L03   14.6       .5                  1        .001                 .0020
                                 L04   23.8       .5     1                     .028    .0570
                                 L10   27.4      1.5     3                     .001    .0020

               TOTALS:                           12.0    15            3        .138    .2154        .0610

AMAGE ANCPS                      E08   13.6       .5                  1        .022                 .0450

               TOTALS:                             .5                 1        .022                 .0450

AMPHARETE LABROPS                E01    5.7      6.0     3            9        .128    .0600        .1960
                                 E02    7.9      3.5     5            2        .015    .0280        .0030
                                 E03    4.5      1.0     2                     .001    .0020
                                 E04   11.5       .5     1                     .005    .0100
                                 E08   13.6       .5     1                     .003    .0070
                                 L01    7.6      4.5     7            2        .048    .0800        .0170

               TOTALS:                           16.0    19           13        .201    .1870        .2160

AMPHARETE FINMARCHICA            E01    5.7      1.0                  2        .001                 .0030
                                 E02    7.9       .5                  1        .001                 .0020
                                 E04   11.5      1.0     1            1        .002    .0020        .0030
                                 E06   12.3      2.0                  4        .001                 .0020
                                 E08   13.6       .5     1                     .000    .0010
                                 E11   14.8       .5                  1        .002                 .0050

               TOTALS:                            5.5     2            5        .009    .0030        .0150

AMPHICTEIS SCAPHOBRANCHIA        E06   12.3      3.0     5            1        .146    .1780        .1140
                                 E08   13.6      1.5     2            1        .069    .0630        .0760
                                 E09   13.6      1.0                  2        .279                 .5580   1
                                 L07   27.4       .5                  1        .086                 .1730
                                 L11   25.6       .5     1                     .038    .0770

          A:  E05 AND E10 NOT PROCESSED.
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              TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
              A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
              THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
          C:  0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
              IS ROUNDED AND REPORTED AS 0.000 G.
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STATION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
TOTALS:			6.5	8		5		.619	.3180		.9210	
MELINNA ELISABETHAE	E01	5.7	2.5			5		.101			.2020	
	E06	12.3	3.0	3		3		.002	.0030		.0010	
	E08	13.6	4.0	5		3		.037	.0390		.0350	
	E11	14.8	.5			1		.010			.0210	
	L02	10.7	.5	1				.001	.0020			
	L11	25.6	.5			1		.000			.0010	
TOTALS:			11.0	9		13		.152	.0440		.2600	
ASABELLIDES SIBIRICA	E06	12.3	1.0			2		.000			.0010	
TOTALS:			1.0			2		.000			.0010	
EUPOLYMNIA HETEROBRANCHIA	L03	14.6	.5	1				1.757	3.5140			
TOTALS:			.5	1				1.757	3.5140			
PISTA CRISTATA	E01	5.7	1.5			3		.120			.2400	
	E06	12.3	5.0	1		9		.081	.0160		.1470	
	E08	13.6	1.5	3				.004	.0080			
	E09	13.6	1.0	1		1		.001	.0010		.0020	
	L09	27.4	1.0	2				.572	1.1440	1		
TOTALS:			10.0	7		13		.779	1.1690		.3890	
POLYCIRRUS SP.	E08	13.6	.5			1		.005			.0110	
	E11	14.8	.5			1		.002			.0040	
TOTALS:			1.0			2		.007			.0150	
TEREBELLIDES STROEMI	E01	5.7	46.5	53		40		3.123	3.6700	1	2.5760	1
	E03	4.5	9.5	10		9		.011	.0100		.0120	
	E06	12.3	11.5	13		10		.005	.0080		.0020	
	E08	13.6	7.5	15				.004	.0080			
	E09	13.6	2.0			4		.005			.0110	
	E12	16.1	.5	1				.001	.0030			
	L10	27.4	.5	1				.003	.0070			
TOTALS:			78.0	93		63		3.153	3.7060		2.6010	
EUCHONE INCOLOR	E09	13.6	.5			1		.000			.0004	

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

3(9)

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        BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
     COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON                  STA-  DEPTH     MEAN REP 1 (D) REP 2 (D)    MEAN   REP 1 (D)    REP 2 (D)
                       TION   (M)     COUNT COUNT       COUNT     WEIGHT  WEIGHT       WEIGHT
                                    #/0.1M2 SEE B               G/0.1M2 (SEE C)

             TOTALS:                     .5                1       .000                .0004

 MYXICOLA AESTHETICA   LC3   14.6        .5    1                   .494   .9890
                       LC8   29.2        .5    1                   .149   .2990

             TOTALS:                    1.0    2                   .644  1.2880

> POTAMILLA INTERMEDIA LC2   10.7        .5                1       .001                .0020
                       LC3   14.6        .5    1                   .088   .1770

             TOTALS:                    1.0    1           1       .089   .1770        .0020

- POTAMILLA OCELLATA   EC8   13.6       4.5    2           7       .013   .0070        .0190

             TOTALS:                    4.5    2           7       .013   .0070        .0190

 SABELLA MEDIA         LC3   14.6       1.0    2                   .970  1.9400

             TOTALS:                    1.0    2                   .970  1.9400

 ALVINIA SP.           EC2    7.9       5.0               10       .002                .0050
                       EC3    4.5       5.0   10                   .003   .0070
                       EC6   12.3      61.5   47          76       .086   .0660        .1060
                       EC8   13.6      14.5   29                   .014   .0280
                       L10   27.4       1.5    3                   .003   .0060
                       L11   25.6        .5    1                   .000   .0010

             TOTALS:                   88.0   90          86       .109   .1080        .1110

> EPITONIUM TINCTUM    L01    7.6        .5    1                   .006   .0130
                       L10   27.4        .5                1       .005                .0110
                       L11   25.6        .5                1       .032                .0640

             TOTALS:                    1.5    1           2       .044   .0130        .0750

 MITRELLA SP.          LC2   10.7       1.5                3       .151                .3030
                       LC5   18.3        .5                1       .062                .1240
                       LC6   21.9        .5                1       .010                .0210
                       LC8   29.2       1.5                3       .274                .5480

             TOTALS:                    4.0                8       .498                .9960

 NASSARIUS MENDICUS    E01    5.7       1.0    1           1       .350   .3390        .3610

               A: E05 AND E10 NOT PROCESSED.
               B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT
                  TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
                  A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
                  THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
               C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                  IS ROUNDED AND REPORTED AS 0.000 G.
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              BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
       COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

   TAXON                 STA-  DEPTH    MEAN REP 1 (D) REP 2 (D)    MEAN   REP 1 (D)   REP 2 (D)
                         TION   (M)    COUNT COUNT        COUNT    WEIGHT  WEIGHT      WEIGHT
                                      #/0.1M2 SEE B              G/0.1M2 (SEE C)

                         LC1    7.6      .5    1                   .199   .3980
                         LO3   14.6     1.0    2                   .318   .6360

               TOTALS:                  2.5    4          1        .867  1.3730        .3610

 CENOPOTA LEVIDENSUS     LC2   10.7      .5               1        .007                .0150

               TOTALS:                   .5               1        .007                .0150

 ODOSTOMIA SP.           EC8   13.6     1.0               2        .002                .0040
                         EC9   13.6     1.5               3        .000                .0010
                         F11   14.8      .5    1                   .001   .0020
                         LC1    7.6     2.5    1          4        .011   .0090        .0130
                         LC2   10.7     8.5    8          9        .051   .0400        .0620
                         LC3   14.6     7.5    5         10        .028   .0130        .0440
                         LC5   18.3     1.0    2                   .002   .0040
                         L10   27.4     2.0    4                   .002   .0050
                         L11   25.6      .5    1                   .003   .0060
                         L12   23.8      .5               1        .000                .0010

               TOTALS:                 25.5   22         29        .102   .0790        .1250

 TURBONILLA SP.          E06   12.3     5.5    6          5        .004   .0030        .0060
                         EC8   13.6     3.5    7                   .004   .0080
                         LC2   10.7     2.5    5                   .008   .0160
                         LC3   14.6     4.0    4          4        .025   .0280        .0230
                         LC4   23.8     1.5    3                   .005   .0110
                         L10   27.4      .5    1                   .028   .0560

               TOTALS:                 17.5   26          9        .075   .1220        .0290

 CYLICHNA SP.            EC8   13.6      .5    1                   .000   .0004
                         E09   13.6     5.0    2          9        .053   .0430        .0630
                         E12   16.1     1.5    2          1        .086   .1410        .0310
                         LC1    7.6      .5    1                   .029   .0580
                         L02   10.7     3.0    4          2        .068   .0810        .0550
                         LC3   14.6     1.5    1          2        .045   .0200        .0700
                         LC4   23.8      .5               1        .073                .1460
                         LC6   21.9      .5    1                   .006   .0120
                         LC9   27.4      .5               1        .001                .0020
                         L10   27.4      .5    1                   .000   .0004
                         L11   25.6      .5    1                   .012   .0250
                         L12   23.8     2.0    1          3        .099   .0200        .1790

        A: E05 AND E10 NOT PROCESSED.
        B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT
           TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
           A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
           THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
        C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
           IS ROUNDED AND REPORTED AS 0.000 G.
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(21)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
TOTALS:			16.5	15		18		.473	.4009		.5460	
AGLAJA DIOMEDEA	E01	5.7	.5			1		.004			.0090	
	L01	7.6	9.0	5		13		.069	.0170		.1220	
	L02	10.7	.5	1				.001	.0030			
TOTALS:			10.0	6		14		.075	.0190		.1310	
GASTROPTERON PACIFICUM	E08	13.6	.5	1				.002	.0040			
	E09	13.6	.5			1		.002			.0050	
	L04	23.8	.5	1				.036	.0730			
TOTALS:			1.5	2		1		.041	.0770		.0050	
ACILA CASTRENSIS	E12	16.1	1.5	3				.345	.6900	1		
	L04	23.8	.5			1		.125			.2510	
	L07	27.4	2.0	2		2		.175	.0950		.2560	
	L09	27.4	.5			1		.001			.0030	
	L10	27.4	23.5	23		24	1	2.834	1.5480		4.1210	1
	L11	25.6	47.0	82	1	12		7.812	14.2160	1	1.4090	1
	L12	23.8	3.0	4		2		.106	.2030		.0090	
TOTALS:			78.0	114		42		11.400	16.7520		6.0490	
NUCULA TENUIS	E09	13.6	2.5	1		4		.098	.0660		.1300	
	E11	14.8	2.5	4		1		.025	.0490		.0010	
	E12	16.1	.5	1				.010	.0210			
	L02	10.7	1.5			3		.005			.0100	
	L04	23.8	.5	1				.000	.0010			
	L06	21.9	1.0			2		.010			.0200	
	L07	27.4	8.0	2		14		.224	.0550		.3940	
	L08	29.2	4.0	3		5		.036	.0510		.0220	
	L09	27.4	2.0			4	1	.018			.0360	
	L10	27.4	12.0	18		6		.467	.5360		.3990	
	L11	25.6	17.0	20		14		.393	.3300		.4560	
	L12	23.8	6.5	7		6		.097	.1730		.0210	
TOTALS:			58.0	57		59		1.385	1.2820		1.4890	
NUCULANA MINUTA	E11	14.8	.5	1				.000	.0010			
	E12	16.1	.5	1				.003	.0060			
	L03	14.6	.5			1		.000			.0004	
	L07	27.4	1.5	1		2		.087	.0310		.1440	
	L08	29.2	3.0			6		.172			.3440	

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

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                    BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
                  COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON                        STA-  DEPTH     MEAN REP 1 (D) REP 2 (D)     MEAN    REP 1 (D)   REP 2 (D)
                             TION   (M)     COUNT COUNT       COUNT      WEIGHT   WEIGHT       WEIGHT
                                          #/0.1M2 SEE B                 G/0.1M2  (SEE C)

                             L09   27.4      .5               1          .036                .0720
                             L10   27.4     6.0     9         4          .344   .5190        .1700
                             L11   25.6     7.5    10         5          .270   .5200        .0210
                             L12   23.8     1.0     1         1          .017   .0220        .0130

             TOTALS:                       21.0    22        20          .931  1.0980        .7644

YOLDIA HYALIS                L03   14.6      .5     1                    .004   .0090

             TOTALS:                         .5     1                    .004   .0090

YOLDIA SCISSURATA            E11   14.8     2.0     3         1         1.148  2.2450   1    .0520
                             L01    7.6     1.0               2          .009                .0180
                             L02   10.7      .5               1          .003                .0070
                             L03   14.6     1.5     2         1          .130   .2480        .0120
                             L07   27.4     4.0               8          .063                .1250
                             L08   29.2     1.0     1         1          .403   .5930        .2140
                             L10   27.4     4.0     4         4          .093   .0600        .1270
                             L11   25.6     1.5     2         1          .856   .1130       1.6000    1
                             L12   23.8      .5     1                    .078   .1560

             TOTALS:                       16.0    13        19         2.785  3.4150       2.1550

YOLDIA THRACIAEFORMIS        L11   25.6      .5     1                    .694  1.3890

             TOTALS:                         .5     1                    .694  1.3890

MUSCULUS LAEVIGATUS          L11   25.6      .5     1                    .041   .0830

             TOTALS:                         .5     1                    .041   .0830

MODIOLUS RECTUS              E03    4.5     1.0               2          .000                .0010

             TOTALS:                        1.0               2          .000                .0010

AXINOPSIDA SERRICATA         E02    7.9     6.0     6         6          .048   .0360        .0600
                             E03    4.5    11.0    11        11          .043   .0330        .0530
                             E06   12.3    43.0    49        37          .089   .0730        .1060
                             E08   13.6    43.5    61        26          .038   .0410        .0360
                             E09   13.6    52.5    25   1    80   1      .376   .2470        .5050    1
                             E11   14.8      .5               1          .001                .0030
                             E12   16.1     1.0     2                    .006   .0130
                             L01    7.6    14.0    14        14          .072   .0640        .0800
                             L02   10.7     2.5               5          .018                .0360

                   A: E05 AND F10 NOT PROCESSED.
                   B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT
                      TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
                      A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
                      THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
                   C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                      IS ROUNDED AND REPORTED AS 0.000 G.
                    BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
                   COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON                      STA-  DEPTH    MEAN REP 1 (D) REP 2 (D)    MEAN    REP 1  (D)   REP 2  (D)
                           TION   (M)    COUNT COUNT       COUNT     WEIGHT  WEIGHT        WEIGHT
                                        #/0.1M2 SEE B              G/0.1M2 (SEE C)

                           LO3   14.6     91.5   62   1     121   1   1.011   .7310        1.2920  1
                           LO4   23.8     32.5   34   1      31   1    .792   .9070   1     .6790  1
                           LO5   19.3     15.5   20   1      11   1    .276   .3320   1     .2210
                           LO6   21.9     16.5    8   1      25   1    .153   .0510   1     .2560  1
                           LO7   27.4    113.0   67   1     159   1   1.250   .9140        1.5860  1
                           LO8   29.2     77.5   40   1     115   1   1.405   .8710   1    1.9390  1
                           LO9   27.4     11.5   13   1      10   1    .115   .1250         .1050  1
                           L10   27.4     69.5  119   1      20         .820  1.4230         .2170
                           L11   25.6     17.5   31   1       4         .097   .1790         .0150
                           L12   23.8     42.5   26   1      59   1    .473   .2930         .6530

                   TOTALS:               661.5  588          735        7.087  6.3330        7.8410

MYSELLA TUMIDA             E02    7.9     61.0   37           85         .070   .0310         .1100
                           E03    4.5     43.0   50           36         .127   .0680         .1860
                           E06   12.3      2.0    3            1         .001   .0010         .0010
                           E08   13.6       .5    1                      .000   .0004
                           E09   13.6      2.0    1            3         .003   .0020         .0040
                           E11   14.8      2.0    4                      .001   .0030
                           E12   16.1      1.0    2                      .004   .0090
                           L01    7.6      5.0    3            7         .003   .0020         .0050
                           L02   10.7       .5    1                      .000   .0010
                           L03   14.6       .5                 1         .000                 .0010
                           L04   23.8      1.0                 2         .003                 .0060
                           L05   18.3       .5    1                      .001   .0030
                           L06   21.9      1.0                 2         .000                 .0010
                           L07   27.4      7.0    3           11         .015   .0050         .0260
                           L08   29.2       .5    1                      .000   .0004
                           L09   27.4      5.5    7   1        4   1     .011   .0190         .0030
                           L10   27.4      3.5    7                      .004   .0080
                           L11   25.6       .5    1                      .001   .0020
                           L12   23.8      1.0    2                      .001   .0030

                   TOTALS:               138.0  124          152         .250   .1578         .3430

CLINOCARDIUM SP.           E02    7.9       .5                 1         .009                 .0180
                           E06   12.3      1.0                 2         .018                 .0360
                           E07   11.3       .5                 1         .041                 .0830  1
                           E09   13.6       .5                 1         .004                 .0090

                   TOTALS:                 2.5                 5         .073                 .1460

SOLEN SICARIUS             E11   14.8       .5                 1        4.590                9.1800  1

                 A: E05 AND E10 NOT PROCESSED.
                 B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT
                    TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
                    A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
                    THE TOTAL COUNT OF WEIGHT IN A REPLICATE.
                 C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                    IS ROUNDED AND REPORTED AS 0.000 G.
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(24)            BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
                COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

   TAXON                    STA-  DEPTH    MEAN  REP 1 (D) REP 2 (D)    MEAN   REP 1  (D)   REP 2 (D)
                            TION   (M)     COUNT COUNT      COUNT     WEIGHT  WEIGHT        WEIGHT
                                         #/0.1M2 SEE B               G/0.1M2 (SEE C)

                 TOTALS:                     .5               1       4.590                 9.1800

MACOMA SP.                  E02     7.9    12.0    12         12      1.036   1.1440   1    .5290   1
                            E03     4.5    12.0    17          7       .825   1.5700   1    .0810
                            E04    11.5    13.0    15         11      3.860   7.4910   1    .2300
                            E06    12.3     8.5    10          7       .137    .0930        .1820
                            E07    11.2     2.0     3          1       .183    .3550   1    .0120
                            E08    13.6     8.0    14          2       .047    .0460        .0490
                            E09    13.6    12.0    11         13       .069    .0900        .0580
                            E11    14.8     1.5     1          2       .001    .0004        .0020
                            L01     7.6     7.5     4         11       .284    .0250        .5440
                            L03    14.6     4.5     3          6       .239    .1180        .3610
                            L05    18.3      .5     1                  .018    .0360
                            L07    27.4     2.5     1          4       .002    .0010        .0040
                            L08    29.2     2.0                4       .012                 .0240
                            L10    27.4     7.0    12          2       .047    .0630        .0320
                            L11    25.6     5.0     2          9       .008    .0010        .0160

                 TOTALS:                   58.0   106         90      6.774  11.0234        2.5240

MACOMA NASUTA               E02     7.9     2.5     3          2      1.306   1.9810   1    .6220
                            E03     4.5     1.5     1          2      4.542   4.5240   1   4.1610   1
                            E04    11.5     2.5                5      2.571                5.1430   1
                            E09    13.6      .5     1                 1.213   2.4270   1
                            E12    16.1     1.0     2                  .752   1.5050   1
                            L01     7.6     3.0     4          2       .878    .7570        .9590
                            L02    10.7      .5                1       .050                 .1000
                            L03    14.6     1.0     2                  .101    .2020

                 TOTALS:                   12.5    13         12     11.415  11.8360       10.9950

TELLINA CARPENTERI          E02     7.9     1.5     2          1       .012    .0010        .0230
                            E03     4.5     1.5     2          1       .003    .0040        .0030
                            E11    14.8      .5                1       .006                 .0130
                            L01     7.6     3.5     3          4       .017    .0110        .0230
                            L11    25.6      .5                1       .006                 .0120

                 TOTALS:                    7.5     7          8       .045    .0160        .0740

TRANSENNELLA TANTILLA       E06    12.3    10.5    21                  .009    .0180
                            E12    16.1      .5     1                  .001    .0030
                            L09    27.4      .5                1       .001                 .0020

                 TOTALS:                   11.5    22          1       .011    .0210        .0020

                         A: E05 AND E10 NOT PROCESSED.
                         B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT
                            TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
                            A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
                            THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
                         C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                            IS ROUNDED AND REPORTED AS 0.000 G.
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3.25)

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               BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
          COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

   TAXON                      STA-  DEPTH    MEAN REP 1 (D) REP 2 (D)    MEAN   REP 1 (D)   REP 2 (D)
                              TION   (M)    COUNT COUNT       COUNT     WEIGHT  WEIGHT       WEIGHT
                                          #/0.1M2 SEE B               G/0.1M2 (SEE C)

 SAXIDOMUS GIGANTEUS          E06   12.3      .5    1                    .002   .0040
                              E08   13.6      .5                1        .921               1.8420   1
                              L03   14.6     2.0    1           3        .086   .0410        .1310
                              L04   23.8     1.0                2        .681               1.3630   1
                              L07   27.4     1.5                3        .212                .4240
                              L08   29.2     2.0    2           2       4.247  2.9270   1   5.5690   1
                              L09   27.4      .5    1                    .752  1.5040   1
                              L10   27.4      .5    1                    .008   .0160
                              L11   25.6     1.5    2           1        .090   .1390        .0410
                              L12   23.8     1.5                3        .075                .1500

                 TOTALS:                    11.5    8          15       7.075  4.6310       9.5190

 PSEPHIDIA LORDI              E01    5.7      .5                1        .010                .0200
                              E03    4.5     1.0    2                    .001   .0030
                              E06   12.3    42.5               85        .034                .0680
                              E08   13.6    11.5   12          11        .059   .0350        .0830
                              E09   13.6    30.0   17          43   1    .242   .1780        .3070
                              E11   14.8      .5    1                    .000   .0004
                              E12   16.1    28.0   33   1      23   1    .026   .0100        .0430
                              L01    7.6     6.5    4           9        .139   .1670        .1110
                              L02   10.7    34.0   40          28        .761   .8740        .6490
                              L03   14.6    20.0    7          33        .171   .0530        .2900
                              L04   23.8      .5    1                    .000   .0010
                              L07   27.4     1.0    2                    .009   .0180
                              L08   29.2     1.0                2        .003                .0060
                              L09   27.4     1.5    1           2        .006   .0030        .0090
                              L10   27.4     4.0    5           3        .030   .0190        .0410
                              L11   25.6     6.5   10           3        .116   .1520        .0800

                 TOTALS:                   185.0  135         243       1.610  1.5134       1.7070

 HUMILARIA KENNERLYI          L02   10.7      .5    1                  13.872 27.7440   1

                 TOTALS:                      .5    1                  13.872 27.7440

 MYA ARENARIA                 E06   12.3      .5                1        .041                .0830
                              E08   13.6     4.5    4           5        .922   .7790   1   1.0660
                              E09   13.6     1.5                3        .134                .2690

                 TOTALS:                     6.5    4           9       1.058   .7790       1.4180

 MYA TRUNCATA                 L01    7.6      .5                1        .066                .1330

                    A: E05 AND E10 NOT PROCESSED.
                    B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT
                       TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
                       A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
                       THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
                    C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                       IS ROUNDED AND REPORTED AS 0.000 G.
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                      BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
                 COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

 TAXON                         STA-  DEPTH     MEAN  REP 1 (D) REP 2 (D)     MEAN   REP 1 (D)    REP 2 (D)
                               TION   (M)     COUNT  COUNT       COUNT      WEIGHT  WEIGHT       WEIGHT
                                            #/0.1M2  SEE B               G/0.1M2 (SEE C)

                    TOTALS:                     .5                1         .066                 .1330

 PANDORA FILOSA                L07   27.4      1.5                3         .029                 .0580
                               L10   27.4       .5                1         .035                 .0700
                               L11   25.6       .5                1         .026                 .0520

                    TOTALS:                    2.5                5         .090                 .1800

 LYONSIA CALIFORNICA           E06   12.3       .5                1         .001                 .0030
                               E08   13.6      1.0     1          1         .002    .0004        .0040
                               E12   16.1       .5     1                    .006    .0130
                               L07   27.4       .5     1                    .039    .0790

                    TOTALS:                    2.5     3          2         .050    .0924        .0070

 CARDIOMYA OLDROYDI            L11   25.6       .5                1         .000                 .0010

                    TOTALS:                     .5                1         .000                 .0010

 PULSELLUM SALISHORUM          L07   27.4       .5                1         .004                 .0080
                               L10   27.4      6.0    12                    .034    .0690
                               L11   25.6      6.0    11          1         .039    .0730        .0040
                               L12   23.8       .5     1                    .002    .0040

                    TOTALS:                   13.0    24          2         .079    .1460        .0120

 MYODOCOPA                     E01    5.7    118.5   114        123         .130    .1180        .1430
                               E02    7.9      4.5     3          6         .006    .0020        .0110
                               E06   12.3     23.5     9         38         .022    .0060        .0390
                               E08   13.6     17.5    28          7         .015    .0210        .0090
                               E09   13.6     17.5    15         20         .012    .0110        .0130
                               E11   14.8     59.0    68   1     50         .021    .0210        .0220
                               E12   16.1      7.0     9          5         .003    .0060        .0004
                               L01    7.6      1.0     1          1         .001    .0010        .0004
                               L02   10.7     33.5    49         18         .022    .0260        .0190
                               L03   14.6      2.0                4         .001                 .0020
                               L04   23.8      1.5     3                    .000    .0004
                               L05   18.3       .5     1                    .000    .0004
                               L06   21.9       .5                1         .000                 .0004
                               L09   27.4      1.0     1          1         .001    .0010        .0010
                               L10   27.4      6.0    12                    .003    .0070
                               L11   25.6      4.5     2          7         .001    .0004        .0020
                               L12   23.8     25.0    17   1     33   1     .017    .0140        .0200
                         A: E05 AND E10 NOT PROCESSED.
                         B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT
                            TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
                            A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
                            THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
                         C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                            IS ROUNDED AND REPORTED AS 0.000 G.
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3(27)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
TOTALS:			323.0	332		314		.259	.2352		.2822	
NEBALIA PUGETTENSIS	E04	11.5	2.0	3		1		.001	.0010		.0004	
TOTALS:			2.0	3		1		.001	.0010		.0004	
MYSIDACEA	E12	16.1	.5			1		.001			.0020	
TOTALS:			.5			1		.001			.0020	
NEOMYSIS INTEGER	L08	29.2	.5	1				.017	.0340			
TOTALS:			.5	1				.017	.0340			
LAMPROPIDAE	E02	7.9	.5			1		.000			.0010	
TOTALS:			.5			1		.000			.0010	
EUDORELLA SP.	E01	5.7	6.0	2		10		.002	.0030		.0010	
	E02	7.9	46.5	46		47		.019	.0230		.0160	
	E03	4.5	12.0	22		2		.005	.0090		.0020	
	E04	11.5	.5	1				.000	.0010			
	E06	12.3	15.5	19		12		.003	.0030		.0030	
	E08	13.6	7.0	7		7		.004	.0060		.0030	
	E09	13.6	59.0	47	1	71	1	.038	.0310		.0460	
	E11	14.8	65.5	121	1	10		.034	.0600		.0080	
	E12	16.1	27.0	37	1	17	1	.016	.0210		.0110	
	L02	10.7	4.0			8		.001			.0030	
	L03	14.6	3.5	5		2		.002	.0030		.0020	
	L07	27.4	25.5	13		38	1	.022	.0110		.0330	
	L08	29.2	2.5	3		2		.001	.0010		.0010	
	L09	27.4	.5	1				.000	.0004			
	L10	27.4	27.5	35		20		.025	.0380		.0130	
	L11	25.6	13.5	16		11		.011	.0160		.0060	
	L12	23.8	16.5	7		26	1	.011	.0050		.0170	
TOTALS:			332.5	392		283		.198	.2314		.1650	
DIASTYLIS SP.	E01	5.7	26.0	28		24		.091	.1010		.0810	
	E02	7.9	42.0	49		36		.162	.2060		.1190	
	E03	4.5	5.0	9		1		.017	.0300		.0050	
	E04	11.5	1.5	2		1		.003	.0020		.0040	
	E06	12.3	2.0			4		.005			.0110	

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

3(28)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
	E07	11.3	.5	1				.000	.0010			
	E08	13.6	3.5	6		1		.010	.0180		.0020	
	L01	7.6	1.0	2				.001	.0030			
	L02	10.7	1.0	1		1		.002	.0010		.0030	
TOTALS:			82.5	97		68		.293	.3620		.2250	
LEPTOCHELIA DUBIA	E01	5.7	102.5	99		106		.053	.0120		.0950	
	E02	7.9	1.0	2				.000	.0004			
TOTALS:			103.5	101		106		.054	.0124		.0950	
SYNIDOTEA BICUSPIDA	E01	5.7	1.5	1		2		.013	.0160		.0110	
TOTALS:			1.5	1		2		.013	.0160		.0110	
MUNACCONIUM WALDRONENSE	E01	5.7	3.0			6		.001			.0020	
	E06	12.3	2.5	1		4		.001	.0004		.0010	
	E08	13.6	1.0	2				.000	.0010			
TOTALS:			6.5	3		10		.002	.0014		.0030	
AMPELISCA SP.	E02	7.9	.5	1				.000	.0010			
	E12	16.1	.5			1		.002			.0040	
TOTALS:			1.0	1		1		.002	.0010		.0040	
AMPELISCA AGASSIZI	E01	5.7	.5	1				.009	.0190			
	E11	14.8	.5			1		.000			.0010	
TOTALS:			1.0	1		1		.010	.0190		.0010	
AMPELISCA PUGETICA	E01	5.7	26.0	23		29		.052	.0540		.0500	
TOTALS:			26.0	23		29		.052	.0540		.0500	
COROPHIUM SP.	E01	5.7	24.5	14		35		.030	.0200		.0410	
	E02	7.9	12.5	17		8		.012	.0140		.0100	
TOTALS:			37.0	31		43		.042	.0340		.0510	
PONTOPOREIA FEMORATA	E11	14.8	.5	1				.000	.0010			
	E12	16.1	8.5	14		3		.005	.0090		.0020	

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON		STATION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(C)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(C)
	TOTALS:			9.0	15		3		.006	.0100		.0020	
PHOTIS SP.		E01	5.7	118.0	97		139		.202	.1710		.2340	
		E03	4.5	.5			1		.001			.0020	
		E06	12.3	2.5	2		3		.003	.0020		.0040	
		E09	13.6	1.0	1		1		.001	.0020		.0004	
	TOTALS:			122.0	100		144		.209	.1750		.2404	
PROTOMEDEIA SP.		E01	5.7	139.5	174		105		.395	.5420		.2480	
		E02	7.9	221.5	235	1	208	1	.693	.7380		.6480	
		E03	4.5	.5			1		.000			.0010	
		E06	12.3	12.5	19		6		.035	.0540		.0160	
		E08	13.6	71.0	102		40		.173	.2190		.1270	
		E09	13.6	2.0	3		1		.002	.0030		.0020	
		E11	14.8	10.5	19		2		.021	.0380		.0040	
		E12	16.1	8.0	15		1		.012	.0230		.0010	
		L01	7.6	26.5	24		29		.034	.0340		.0350	
		L02	10.7	51.0	64		38		.102	.1380		.0670	
		L11	25.6	1.5	3				.001	.0030			
	TOTALS:			544.5	658		431		1.470	1.7920		1.1490	
LYSIANASSIDAE		E11	14.8	1.0			2		.000			.0010	
	TOTALS:			1.0			2		.000			.0010	
ORCHOMENE SP.		E01	5.7	13.5	16		11		.024	.0300		.0180	
		E02	7.9	4.5	5		4		.004	.0030		.0050	
		E11	14.8	6.0	12				.008	.0170			
		E12	16.1	9.5	19				.007	.0150			
	TOTALS:			33.5	52		15		.044	.0650		.0230	
WESTWOODILLA CAECULA		E01	5.7	3.0	3		3		.007	.0030		.0110	
		E02	7.9	3.0	3		3		.003	.0040		.0030	
		E04	11.5	.5	1				.000	.0004			
		E06	12.3	3.0	4		2		.004	.0030		.0050	
		E08	13.6	.5	1				.000	.0004			
		E09	13.6	.5			1		.000			.0010	
		E11	14.8	1.5	1		2		.001	.0010		.0010	
	TOTALS:			12.0	13		11		.016	.0118		.0210	

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

3(30)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STATION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 (D) COUNT SEE B	REP 2 (D) COUNT	MEAN WEIGHT G/0.1M2	REP 1 (D) WEIGHT (SEE C)	REP 2 (D) WEIGHT
PHOXOCEPHALIDAE	E11	14.8	2.0		4	.002		.0040
TOTALS:			2.0		4	.002		.0040
HETEROPHOXUS OCULATUS	E01	5.7	34.5	41	28	.088	.0620	.1140
	E02	7.9	1.5	1	2	.003	.0050	.0020
	E09	13.6	1.0		2	.000		.0010
	E11	14.8	17.5	27	8	.028	.0360	.0200
	E12	16.1	18.0	23	13	.031	.0500	.0120
	L01	7.6	1.5	2	1	.002	.0040	.0010
	L02	10.7	3.5	2	5	.003	.0050	.0020
	L03	14.6	1.5	3		.000	.0010	
	L04	23.8	1.0	2		.000	.0010	
	L07	27.4	6.0	5	7	.022	.0200	.0250
	L08	29.2	4.5	4	5	.012	.0160	.0090
	L09	27.4	1.5	2	1	.001	.0010	.0010
	L10	27.4	13.5	5	22	.026	.0030	.0500
	L11	25.6	9.5	8	11	.013	.0100	.0160
	L12	23.8	7.5	7	8	.012	.0120	.0130
TOTALS:			122.5	132	113	.246	.2260	.2660
FOXIPHALUS COGNATUS	E01	5.7	12.5	11	14	.012	.0140	.0110
	E02	7.9	1.0	2		.001	.0020	
	E09	13.6	.5	1		.001	.0020	
	E11	14.8	1.5	3		.000	.0010	
	L01	7.6	.5	1		.000	.0010	
	L02	10.7	.5		1	.000		.0010
TOTALS:			16.5	18	15	.016	.0200	.0120
RHEPOXYNIUS SP.	E11	14.8	4.5		9	.002		.0050
TOTALS:			4.5		9	.002		.0050
DULICHIA SP.	E01	5.7	2.5		5	.002		.0040
	E02	7.9	.5	1		.000	.0010	
	E08	13.6	1.0	1	1	.001	.0004	.0010
	E11	14.8	.5	1		.000	.0004	
TOTALS:			4.5	3	6	.003	.0018	.0050
TRITELLA PILIMANA	E01	5.7	3.5	2	5	.001	.0010	.0020

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

3(5)

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              BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
         COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

 TAXON                       STA-  DEPTH     MEAN  REP 1 (D) REP 2 (D)     MEAN    REP 1 (D)    REP 2 (D)
                             TION   (M)     COUNT  COUNT        COUNT      WEIGHT  WEIGHT        WEIGHT
                                          #/0.1M2  SEE B                 G/0.1M2  (SEE C)

                             E06    12.3       .5                  1       .000                  .0004

                  TOTALS:                     4.0      2           6       .002    .0010         .0024

 CRANGON SP.                 E12    16.1       .5      1                   .003    .0070

                  TOTALS:                      .5      1                   .003    .0070

 CRANGON NIGRICAUDA          E08    13.6       .5      1                   .001    .0030

                  TOTALS:                      .5      1                   .001    .0030

 CRANGON FRANCISCORUM        E07    11.3       .5      1                   .297    .5940    1

                  TOTALS:                      .5      1                   .297    .5940

 UPOGEBIA PUGETTENSIS        E02     7.9       .5      1                   .000    .0010
                             E03     4.5      1.0                  2       .918                 1.8370

                  TOTALS:                     1.5      1           2       .919    .0010        1.8370

 CALLIANASSA CALIFORNIENSI   E03     4.5      1.0      1           1     12.043   3.8740    1 20.2120    1

                  TOTALS:                     1.0      1           1     12.043   3.8740      20.2120

 BRACHYURA (JUVENILES)       E01     5.7     23.0     21          25       .014    .0160         .0120
                             E02     7.9     12.5     15          10       .011    .0140         .0080
                             E03     4.5     14.0     18          10       .013    .0190         .0080
                             E04    11.5      1.5      3                   .001    .0020
                             E06    12.3     26.5     28          25       .016    .0130         .0190
                             E07    11.3      1.0                  2       .001                  .0030
                             E08    13.6     33.5     54          13       .028    .0490         .0080
                             E09    13.6      9.0      8          10       .005    .0040         .0060
                             E11    14.8    139.0     84   1     194   1   .119    .0690         .1700
                             E12    16.1     59.5     81   1      38   1   .047    .0710         .0230
                             L10    27.4      1.0      2                   .000    .0010

                  TOTALS:                   320.5    314         327       .257    .2580         .2570

 PUGETTIA GRACILIS           E08    13.6       .5                  1       .003                  .0060

                  TOTALS:                      .5                  1       .003                  .0060

 PINNIXA OCCIDENTALIS        E01     5.7     17.5     15          20       .125    .1140         .1370

                   A:  E05 AND E10 NOT PROCESSED.
                   B:  DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT
                       TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
                       A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
                       THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
                   C:  0.0004 G INDICATES WEIGHT LESS THAN 0.0010. FOR MEAN VALUES THIS
                       IS ROUNDED AND REPORTED AS 0.000 G.
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3(B)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
	E02	7.9	.5			1		.001			.0030	
	E03	4.5	5.0	6		4		.058	.0680		.0490	
	E06	12.3	4.5	5		4		.024	.0290		.0190	
	E08	13.6	6.0	8		4		.043	.0540		.0320	
	E09	13.6	1.5	1		2		.003	.0030		.0030	
	E11	14.8	23.5	11		36		.094	.0410		.1430	
	E12	16.1	5.5	6		5		.025	.0370		.0140	
	L01	7.6	1.0	2				.006	.0120			
	L02	10.7	30.5	34		27		.284	.3500		.2180	
	L03	14.6	7.0	12		2		.034	.0650		.0030	
	L04	23.8	1.0	2				.005	.0110			
	L07	27.4	1.0	2				.005	.0110			
	L09	27.4	2.0	2		2		.026	.0220		.0300	
	L11	25.6	.5			1		.001			.0030	
	L12	23.8	1.5			3		.005			.0100	
TOTALS:			108.5	106		111		.743	.8170		.6690	
SCLEROPLAX GRANULATA	E03	4.5	10.5	9		12		.061	.0510		.0710	
TOTALS:			10.5	9		12		.061	.0510		.0710	
SIPUNCULA	E11	14.8	.5			1		.010			.0210	
TOTALS:			.5			1		.010			.0210	
PRIAPULUS CAUDATUS	E01	5.7	1.5	2		1		.418	.2150		.6210	
	E02	7.9	.5	1				.001	.0030			
	E03	4.5	.5	1				.015	.0310			
	E06	12.3	.5	1				.010	.0210			
	E11	14.8	.5			1		.077			.1540	
	L02	10.7	1.0	2				1.842	3.6850			
	L07	27.4	.5			1		.048			.0970	
TOTALS:			5.0	7		3		2.413	3.9550		.8720	
PHORONIDA	L01	7.6	.5			1		.001			.0020	
TOTALS:			.5			1		.001			.0020	
AMPHIURIDAE	E01	5.7	4.0	2		6		.029	.0020		.0570	
	E02	7.9	3.5	4		3		.001	.0010		.0020	
	E08	13.6	10.5	20		1		.455	.9070	1	.0040	
	E09	13.6	3.0	1		5		.033	.0360		.0310	

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

3(33)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STATION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(C)	REP 2 COUNT	(C)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(C)	REP 2 WEIGHT	(C)
	E11	14.8	53.0	48	1	58	1	4.859	5.2240	1	4.4940	1
	E12	16.1	21.5	22		21	1	2.146	1.6080	1	2.6850	1
	L01	7.6	7.0	8		6		.066	.0940		.0390	
	L02	10.7	30.0	21		39		.414	.2790		.5500	
	L03	14.6	26.0	43		9		.552	.9650		.1400	
	L04	23.8	6.0	1		11		.146	.0580		.2340	
	L07	27.4	8.5	5		12		.110	.0770		.1440	
	L08	29.2	3.0	2		4		.075	.0310		.1190	
	L09	27.4	2.0	1		3		.067	.0030		.1320	1
	L10	27.4	13.0	19		7		.250	.2690		.2320	
	L11	25.6	22.5	22		23	1	.457	.5340		.3810	
	L12	23.8	64.5	54	1	75	1	.968	.7090		1.2270	1
TOTALS:			278.0	273		283		10.634	10.7970		10.4710	
PENTAMERA POPULIFERA	E11	14.8	3.5	3		4		1.227	.2390		2.2150	
	L07	27.4	11.0			22		.752			1.5050	1
	L10	27.4	362.0	659	1	65	1	15.019	11.3300	1	18.7090	1
TOTALS:			376.5	662		91		16.999	11.5690		22.4290	
MOLPADIA INTERMEDIA	L02	10.7	.5			1		13.276			26.5520	1
	L03	14.6	.5	1				11.690	23.3800	1		
	L12	23.8	.5	1				8.156	16.3130	1		
TOTALS:			1.5	2		1		33.122	39.6930		26.5520	
TOTAL			22868.5	18394		27343		256.827	263.416		250.239	

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (C) COLUMNS ADJACENT
TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
IS ROUNDED AND REPORTED AS 0.000 G.

APPENDIX 2

Number and dry blotted biomass of dominant infaunal macrobenthos obtained in two replicate 0.1 m^2 Van Veen grab samples at 20 stations in Bellingham Bay and two stations in Samish Bay in May and October, 1983. Dominant species are those that comprise either 10% of the total number or 10% of the total dry-blotted weight in one grab sample.

Appendix 2
(1 of 6)

DOMINANT BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
PACHYCERIANTHUS FIMBRIATA	L04	23.8	1.0	1		1		.852	.7130	1	.5910	1
	L05	18.3	1.0			2		.625			1.2510	1
	L07	27.4	1.0	1		1		7.612	8.1250	1	7.1000	1
	L11	25.6	1.5	1		2		2.584	.6820		4.4860	1
	L12	23.8	.5	1				1.701	3.4030	1		
TOTALS:			5.0	4		6		13.375	12.9230		13.8280	
NEMERTEA	L04	23.8	3.0	3		3		.279	.5260	1	.0320	
	L07	27.4	1.5	1		2		2.186	3.3400	1	1.0320	
TOTALS:			4.5	4		5		2.465	3.8660		1.0640	
CEREBRATULUS SP.	L10	27.4	1.0			2		3.821			7.6430	1
TOTALS:			1.0			2		3.821			7.6430	
NEREIS BRANDTI	E06	12.3	.5	1				3.184	6.3680	1		
TOTALS:			.5	1				3.184	6.3680			
NEREIS PROCERA	L05	18.3	2.5	4		1		.101	.1600	1	.0430	
	L06	21.9	2.5	3	1	2		.024	.0320		.0160	
TOTALS:			5.0	7		3		.126	.1920		.0590	
NEPHTYS FERRUGINEA	E08	13.6	.5			1		2.311			4.6220	1
TOTALS:			.5			1		2.311			4.6220	
HEMIPODUS BOREALIS	L09	27.4	1.0	1		1		.163	.0160		.3100	1
TOTALS:			1.0	1		1		.163	.0160		.3100	
GLYCINDE PICTA	E02	7.9	46.5	53		40		.934	1.0700	1	.7980	
	E06	12.3	55.5	66		45		.694	.6400		.7490	1
	E09	13.6	25.0	25	1	25		.563	.6770	1	.4490	1
	E12	16.1	2.0	2		2		.276	.1530		.3990	1
	L05	18.3	4.0	2		6		.250	.1230	1	.3770	1
	L06	21.9	3.5	1		6	1	.142	.0140		.2710	1
TOTALS:			136.5	149		124		2.860	2.6770		3.0430	
GONIADA BRUNNEA	L06	21.9	.5	1				.141	.2820	1		

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.0010. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

4(z)

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             DOMINANT BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
             COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

   TAXON                   STA-  DEPTH     MEAN  REP 1 (D) REP 2 (D)     MEAN   REP 1  (D)    REP 2 (D)
                           TION   (M)     COUNT  COUNT        COUNT     WEIGHT  WEIGHT        WEIGHT
                                        #/0.1M2  SEE B               G/0.1M2  (SEE C)

                           L09   27.4       1.0                  2        .141                .2830   1

              TOTALS:                       1.5      1           2        .282   .2820        .2830

DORVILLEA ANNULATA         B03    4.5     508.5    541   1     476   1   1.021  1.1150        .9270

              TOTALS:                     508.5    541         476       1.021  1.1150        .9270

TAUBERIA GRACILIS          L04   23.8      16.5     28   1       5        .003   .0050        .0010
                           L06   21.9       5.5      1          10   1    .002   .0004        .0030
                           L10   27.4      28.0     29          27   1    .024   .0290        .0200
                           L11   25.6      30.5     28          33   1    .017   .0150        .0190

              TOTALS:                      80.5     86          75        .046   .0494        .0430

LAONICE CIRRATA            L09   27.4        .5      1                    .167   .3340   1

              TOTALS:                        .5      1                    .167   .3340

THARYX SP.                 B02    7.9     657.0    899   1     415   1   3.871  4.4580   1   3.2850   1
                           B03    4.5    1036.0    976   1    1096   1   1.805  1.9390   1   1.6720
                           B04   11.5     408.0    501   1     315   1   1.743  1.9130   1   1.5740   1
                           B06   12.3    1466.0   1270   1    1662   1   3.281  2.8390   1   3.7240   1
                           B07   11.3     153.5    233   1      74   1    .961  1.6030   1    .3200   1
                           B08   13.6    1595.0   1920   1    1270   1   2.400  2.4620   1   2.3380   1
                           L01    7.6     809.5    836   1     783       1.545  1.4020   1   1.6890   1
                           L02   10.7     379.0    310   1     448   1   1.601  1.3030       1.9000
                           L03   14.6     448.0    295   1     601   1   1.561  1.1350       1.9870   1
                           L04   23.8      85.5     96   1      75   1    .250   .1950        .3060
                           L05   18.3      37.5     27   1      48   1    .171   .1450   1    .1980

              TOTALS:                    7075.0   7363        6787      19.193 19.3940       18.9930

TRAVISIA PUPA              L12   23.8       3.0      1           5       4.306  2.0920        6.5210   1

              TOTALS:                       3.0      1           5       4.306  2.0920        6.5210

STERNASPIS SCUTATA         L11   25.6       9.0     12           6       1.718  2.0180        1.4180   1

              TOTALS:                       9.0     12           6       1.718  2.0180        1.4180

HETEROMASTUS FILOBRANCHUS  B09   13.6       1.5      1           2        .353   .6910   1    .0150
                           L05   18.3       4.0      1           7        .483   .2520   1    .7140   1
                           L06   21.9       1.0                  2        .037                .0750   1

                  A: B05 AND B10 NOT PROCESSED.
                  B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT
                     TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
                     A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
                     THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
                  C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                     IS ROUNDED AND REPORTED AS 0.000 G.
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7(3)

DOMINANT BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STATION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
TOTALS:			6.5	2		11		.874	.9430		.8040	
OWENIA FUSIFORMIS	E01	5.7	1038.0	895	1	1181	1	7.271	6.6330	1	7.9090	1
	L01	7.6	7705.5	2826	1	12585	1	8.309	5.6560	1	10.9630	1
	L02	10.7	463.0	324	1	602	1	.191	.1000		.2820	
TOTALS:			9206.5	4045		14368		15.771	12.3890		19.1540	
AMPHICTEIS SCAPHOBRANCHIA	E09	13.6	1.0			2		.279			.5580	1
TOTALS:			1.0			2		.279			.5580	
PISTA CRISTATA	L09	27.4	1.0	2				.572	1.1440	1		
TOTALS:			1.0	2				.572	1.1440			
TEREBELLIDES STROEMI	E01	5.7	46.5	53		40		3.123	3.6700	1	2.5760	1
TOTALS:			46.5	53		40		3.123	3.6700		2.5760	
ACILA CASTRENSIS	E12	16.1	1.5	3				.345	.6900	1		
	L10	27.4	23.5	23		24	1	2.834	1.5480		4.1210	1
	L11	25.6	47.0	82	1	12		7.812	14.2160	1	1.4090	1
TOTALS:			72.0	108		36		10.992	16.4540		5.5300	
NUCULA TENUIS	L09	27.4	2.0			4	1	.018			.0360	
TOTALS:			2.0			4		.018			.0360	
YOLDIA SCISSURATA	E11	14.8	2.0	3		1		1.148	2.2450	1	.0520	
	L11	25.6	1.5	2		1		.856	.1130		1.6000	1
TOTALS:			3.5	5		2		2.005	2.3580		1.6520	
AXINOPSIDA SERRICATA	E09	13.6	52.5	25	1	80	1	.376	.2470		.5050	1
	L03	14.6	91.5	62	1	121	1	1.011	.7310		1.2920	1
	L04	23.8	32.5	34	1	31	1	.792	.9070	1	.6780	1
	L05	18.3	15.5	20	1	11	1	.276	.3320	1	.2210	
	L06	21.9	16.5	8	1	25	1	.153	.0510	1	.2560	1
	L07	27.4	113.0	67	1	159	1	1.250	.9140		1.5860	1
	L08	29.2	77.5	40	1	115	1	1.405	.8710	1	1.9390	1
	L09	27.4	11.5	13	1	10	1	.115	.1250		.1050	1

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

4(4)

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          DOMINANT BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
          COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)
TAXON
                        STA-  DEPTH     MEAN  REP 1 (C) REP 2 (C)    MEAN    REP 1  (C)    REP 2 (C)
                        TION   (M)     COUNT  COUNT       COUNT     WEIGHT   WEIGHT        WEIGHT
                                     #/0.1M2  SEE B                G/0.1M2  (SEE C)
                        L10   27.4      69.5   119   1     20        .820   1.4230          .2170
                        L11   25.6      17.5    31   1      4        .097    .1750          .0150
                        L12   23.8      42.5    26   1     59   1    .473    .2930          .6530
              TOTALS:
                                       540.0   445        635       6.770   6.0730         7.4670
MYSELLA TUMIDA
                        L09   27.4       5.5     7   1      4   1    .011    .0190          .0030
              TOTALS:
                                         5.5     7          4        .011    .0190          .0030
CLINOCARDIUM SP.
                        EO7   11.3        .5                1        .041                   .0830   1
              TOTALS:
                                          .5                1        .041                   .0830
SOLEN SICARIUS
                        E11   14.8        .5                1       4.590                  9.1800   1
              TOTALS:
                                          .5                1       4.590                  9.1800
MACOMA SP.
                        EO2    7.9      12.0    12         12       1.036   1.1440   1      .9290   1
                        EO3    4.5      12.0    17          7        .825   1.5700   1      .0810
                        EO4   11.6      13.0    15         11       3.860   7.4910   1      .2300
                        EO7   11.3       2.0     3          1        .183    .3550   1      .0120
              TOTALS:
                                        39.0    47         31       5.906  10.5600         1.2520
MACOMA NASUTA
                        EO2    7.9       2.5     3          2       1.306   1.9810   1      .6320
                        EO3    4.5       1.5     1          2       4.542   4.9240   1     4.1610   1
                        EO4   11.6       2.5                5       2.571                  5.1430   1
                        EO9   13.6        .5     1                  1.213   2.4270   1
                        E12   16.1       1.0     2                   .752   1.5050   1
              TOTALS:
                                         8.0     7          9      10.386  10.8370         9.9360
SAXIDOMUS GIGANTEUS
                        EO8   13.6        .5                1        .921                  1.8420   1
                        LO4   23.8       1.0                2        .681                  1.3630   1
                        LO8   29.2       2.0     2          2       4.247   2.9270   1     5.5680   1
                        LO9   27.4        .5     1                   .752   1.5040   1
              TOTALS:
                                         4.0     3          5       6.602   4.4310         8.7730
PSEPHIDIA LORDI
                        EO9   13.6      30.0    17         43   1    .242    .1780          .3070
                        E12   16.1      28.0    33   1     23   1    .026    .0100          .0430
              TOTALS:
                                        58.0    50         66        .269    .1880          .3500

                     A: EO5 AND E10 NOT PROCESSED.
                     B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (C) COLUMNS ADJACENT
                        TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
                        A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
                        THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
                     C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                        IS ROUNDED AND REPORTED AS 0.000 G.
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4(5)

DOMINANT BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
HUMILARIA KENNERLYI	LO2	10.7	.5	1				13.872	27.7440	1		
TOTALS:			.5	1				13.872	27.7440			
MYA ARENARIA	EO8	13.6	4.5	4		5		.922	.7790	1	1.0660	
TOTALS:			4.5	4		5		.922	.7790		1.0660	
MYODOCOPA	E11	14.8	59.0	68	1	50		.021	.0210		.0220	
	L12	23.8	25.0	17	1	33	1	.017	.0140		.0200	
TOTALS:			84.0	85		83		.038	.0350		.0420	
EUDORELLA SP.	EO9	13.6	59.0	47	1	71	1	.038	.0310		.0460	
	E11	14.8	65.5	121	1	10		.034	.0600		.0080	
	E12	16.1	27.0	37	1	17	1	.016	.0210		.0110	
	LO7	27.4	25.5	13		38	1	.022	.0110		.0330	
	L12	23.8	16.5	7		26	1	.011	.0050		.0170	
TOTALS:			193.5	225		162		.121	.1280		.1150	
PROTOMEDEIA SP.	EO2	7.9	221.5	235	1	208	1	.693	.7380		.6480	
TOTALS:			221.5	235		208		.693	.7380		.6480	
CRANGON FRANCISCORUM	EO7	11.2	.5	1				.297	.5940	1		
TOTALS:			.5	1				.297	.5940			
CALLIANASSA CALIFORNIENSI	EO3	4.5	1.0	1		1		12.043	3.8740	1	20.2120	1
TOTALS:			1.0	1		1		12.043	3.8740		20.2120	
BRACHYURA (JUVENILES)	E11	14.8	139.0	94	1	194	1	.119	.0690		.1700	
	E12	16.1	59.5	81	1	38	1	.047	.0710		.0230	
TOTALS:			198.5	165		232		.166	.1400		.1930	
AMPHIURIDAE	EO8	13.6	10.5	20		1		.455	.9070	1	.0040	
	E11	14.8	53.0	48	1	58	1	4.859	5.2240	1	4.4940	1
	E12	16.1	21.5	22		21	1	2.146	1.6080	1	2.6850	1
	LO9	27.4	2.0	1		3		.067	.0030		.1320	1
	L11	25.6	22.5	22		23	1	.457	.5340		.3810	

A: E05 AND E10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT
TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL
THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
IS ROUNDED AND REPORTED AS 0.000 G.

4(6)

DOMINANT BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY SPECIES
COUNT AND WEIGHT PER 0.1M2 AT EACH STATION AND REPLICATE (SEE A)

TAXON	STA-TION	DEPTH (M)	MEAN COUNT #/0.1M2	REP 1 COUNT SEE B	(D)	REP 2 COUNT	(D)	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE C)	(D)	REP 2 WEIGHT	(D)
	L12	23.8	64.5	54	1	75	1	.968	.7090		1.2270	1
TOTALS:			174.0	167		131		8.954	8.9950		8.9230	
PENTAMERA POPULIFERA	L07	27.4	11.0			22		.752			1.5050	1
	L10	27.4	362.0	659	1	65	1	15.019	11.3300	1	18.7090	1
TOTALS:			373.0	659		87		15.772	11.3300		20.2140	
MOLPADIA INTERMEDIA	L02	10.7	.5			1		13.276			26.5520	1
	L03	14.6	.5	1				11.690	23.3800	1		
	L12	23.8	.5	1				8.156	16.3130	1		
TOTALS:			1.5	2		1		33.122	39.6930		26.5520	
TOTAL			19079.0	14490		23668		209.253	214.432		204.073	

A: B05 AND B10 NOT PROCESSED.
B: DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE (D) COLUMNS ADJACENT TO COUNT OR WEIGHT FOR REPLICATES 1 AND 2.
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL THE TOTAL COUNT OR WEIGHT IN A REPLICATE.
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.0010. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.

APPENDIX 3

Compontion of infaunal macrobenthos at 20 stations in Bellingham Bay and two stations in Samish Bay sampled by 0.1 m^2 Van Veen grab in May and October, 1983.

Appendix 3

(1 of 22)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
E01	HALCAMPA DECEMTENTACULATA	1.5	1	2	.231	.0640	.3990					
	NEMERTEA	4.0	4	4	.064	.0570	.0710					
	HARMOTHOE IMBRICATA	1.0		2	.002		.0040					
	TENONIA KITSAPENSIS	.5		1	.003		.0070					
	PHOLOE MINUTA	3.0	4	2	.015	.0270	.0040					
	ETEONE LONGA	3.5	3	4	.018	.0140	.0220					
	EULALIA SP.	.5		1	.007		.0140					
	OPHIODROMUS PUGETTENSIS	2.0	2	2	.043	.0560	.0310					
	NEREIS SP.	.5		1	.003		.0060					
	NEPHTYS LONGOSETOSA	1.5	1	2	.001	.0004	.0010					
	GLYCINDE PICTA	19.0	15	23	.216	.1490	.2840					
	LUMBRINERIS SP.	21.0	18	24	.394	.2950	.4940					
	DORVILLEA SP.	5.5	4	7	.029	.0220	.0370					
	LAONICE CIRRATA	3.0	3	3	.204	.2940	.1150					
	POLYDORA CARDALIA	1.5	1	2	.018	.0050	.0310					
	PRIONOSPIO STEENSTRUPI	2.5	1	4	.002	.0010	.0030					
	SPIOPHANES BERKELEYORUM	.5	1		.001	.0020						
	PARAPRIONOSPIO PINNATA	2.5	1	4	.209	.0820	.3370					
	TROCHOCHAETA MULTISETOSA	.5		1	.024		.0480					
	CIRRATULUS CIRRATUS	40.5	25	56	.264	.0950	.4330					
	THARYX SP.	98.0	101	95	.314	.5320	.0960					
	CAPITELLA SP.	1.0		2	.000		.0010					
	HETEROMASTUS FILIFORMIS	.5	1		.001	.0020						
	HETEROMASTUS FILOBRANCHUS	.5	1		.002	.0050						
	MEDIOMASTUS CALIFORNIENSI	14.5	10	19	.078	.0690	.0880					
	MALDANE GLEBIFLEX	1.0	2		.005	.0110						
	PRAXILLELLA GRACILIS	3.0	2	4	.118	.0200	.2160					
	EUCLYMENINAE	3.5	1	6	.011	.0010	.0220					
	OWENIA FUSIFORMIS	1038.0	895	1181	7.271	6.6330	7.9090	1		1	1	
	PECTINARIA GRANULATA	1.0	1	1	.008	.0020	.0140					
	AMPHARETE LABROPS	6.0	3	9	.128	.0600	.1960					
	AMPHARETE FINMARCHICA	1.0		2	.001		.0030					
	MELINNA ELISABETHAE	2.5		5	.101		.2020					
	PISTA CRISTATA	1.5		3	.120		.2400					
	TEREBELLIDES STROEMI	46.5	53	40	3.123	3.6700	2.5760					
	NASSARIUS MENDICUS	1.0	1	1	.350	.3390	.3610					
	AGLAJA DIOMEDEA	.5		1	.004		.0090					
	PSEPHIDIA LORDI	.5		1	.010		.0200					
	MYODOCOPA	118.5	114	123	.130	.1180	.1430					
	EUDORELLA SP.	6.0	2	10	.002	.0030	.0010					
	DIASTYLIS SP.	26.0	28	24	.091	.1010	.0810					
	LEPTOCHELIA DUBIA	102.5	99	106	.053	.0120	.0950					
	SYNIDOTEA BICUSPIDA	1.5	1	2	.013	.0160	.0110					

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN
VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1".
A DOMINANT TAXON IS ONE COMPRISING AT LEAST
10% OF THE TOTAL COUNT IN A REPLICATE.

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          BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-  TAXON                           MEAN  REP 1  REP 2     MEAN    REP 1    REP 2 TOTAL  MEAN  REP1  REP2  DPTH
TION                                 COUNT  COUNT  COUNT   WEIGHT   WEIGHT   WEIGHT   NSP   NSP   NSP   NSP   (M)
                                   #/0.1M2                G/0.1M2  (SEE B)          SEE C

      MUNNOGONIUM WALDRONENSE          3.0             6     .001             .0020
      AMPELISCA AGASSIZI                .5      1            .009    .0190
      AMPELISCA PUGETICA              26.0     23     29     .052    .0540    .0500
      COROPHIUM SP.                   24.5     14     35     .030    .0200    .0410
      PHOTIS SP.                     118.0     97    139     .202    .1710    .2340
      PROTOMEDEIA SP.                139.5    174    105     .395    .5420    .2480
      ORCHOMENE SP.                   13.5     16     11     .024    .0300    .0180
      WESTWOODILLA CAECULA             3.0      3      3     .007    .0030    .0110
      HETEROPHOXUS OCULATUS           34.5     41     28     .088    .0620    .1140
      FOXIPHALUS COGNATUS             12.5     11     14     .012    .0140    .0110
      DULICHIA SP.                     2.5             5     .002             .0040
      TRITELLA PILIMANA                3.5      2      5     .001    .0010    .0020
      BRACHYURA (JUVENILES)           23.0     21     25     .014    .0160    .0120
      PINNIXA OCCIDENTALIS            17.5     15     20     .125    .1140    .1370
      PRIAPULUS CAUDATUS               1.5      2      1     .418    .2150    .6210
      AMPHIURIDAE                      4.0      2      6     .029    .0020    .0570

TOT:                                2016.5   1821   2212   15.104  14.0204  16.1870    59    50    46    54   5.7

E02   HALCAMPA DECEMTENTACULATA         .5             1     .310             .6210
      NEMERTEA                         4.0      5      3     .050    .0330    .0670
      POLYEUNOA TUTA                    .5             1     .003             .0060
      ETEONE LONGA                     3.5      5      2     .005    .0090    .0010
      OPHIODROMUS PUGETTENSIS          5.5      7      4     .055    .0710    .0390
      NEPHTYS LONGOSETOSA             27.5     34     21     .033    .0380    .0280
      GLYCINDE PICTA                  46.5     53     40     .934   1.0700    .7980
      LUMBRINERIS SP.                   .5      1            .009    .0190
      DORVILLEA SP.                    6.5      8      5     .017    .0230    .0110
      ARICIDEA SP.                      .5      1            .000    .0004
      PRIONOSPIO CIRRIFERA             1.0             2     .000             .0004
      PARAPRIONOSPIO PINNATA           3.0      3      3     .101    .0550    .1480
      CIRRATULUS CIRRATUS              8.5     10      7     .014    .0150    .0140
      THARYX SP.                     657.0    899    415    3.871   4.4580   3.2850     1           1     1
      ARMANDIA BREVIS                 21.5     20     23     .101    .1170    .0850
      HETEROMASTUS FILOBRANCHUS        3.5      7            .155    .3100
      MEDIOMASTUS CALIFORNIENSI        1.0             2     .161             .3230
      OWENIA FUSIFORMIS                 .5      1            .003    .0060
      AMPHARETE LABROPS                3.5      5      2     .015    .0280    .0030
      AMPHARETE FINMARCHICA             .5             1     .001             .0020
      ALVINIA SP.                      5.0            10     .002             .0050
      AXINOPSIDA SERRICATA             6.0      6      6     .048    .0360    .0600
      MYSELLA TUMIDA                  61.0     37     85     .070    .0310    .1100
      CLINOCARDIUM SP.                  .5             1     .009             .0180

                                                 A: E05 AND E10 NOT PROCESSED.
                                                 B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN
                                                    VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.
                                                 C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                                    MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
                                                    DOMINANT TAXA ARE FLAGGED WITH A "1".
                                                    A DOMINANT TAXON IS ONE COMPRISING AT LEAST
                                                    10% OF THE TOTAL COUNT IN A REPLICATE.
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
	MACOMA SP.	12.0	12	12	1.036	1.1440	.9290					
	MACOMA NASUTA	2.5	3	2	1.306	1.9810	.6320					
	TELLINA CARPENTERI	1.5	2	1	.012	.0010	.0230					
	MYODOCOPA	4.5	3	6	.006	.0020	.0110					
	LAMPROPIDAE	.5		1	.000		.0010					
	EUDORELLA SP.	46.5	46	47	.019	.0230	.0160					
	DIASTYLIS SP.	42.0	49	36	.162	.2060	.1190					
	LEPTOCHELIA DUBIA	1.0	2		.000	.0004						
	AMPELISCA SP.	.5	1		.000	.0010						
	COROPHIUM SP.	12.5	17	8	.012	.0140	.0100					
	PROTOMEDEIA SP.	221.5	235	208	.693	.7380	.6480	1		1	1	
	ORCHOMENE SP.	4.5	5	4	.004	.0030	.0050					
	WESTWOODILLA CAECULA	3.0	3	3	.003	.0040	.0030					
	HETEROPHOXUS OCULATUS	1.5	1	2	.003	.0050	.0020					
	FOXIPHALUS OBTUSIDENS	1.0	2		.001	.0020						
	DULICHIA SP.	.5	1		.000	.0010						
	UPOGEBIA PUGETTENSIS	.5	1		.000	.0010						
	BRACHYURA (JUVENILES)	12.5	15	10	.011	.0140	.0080					
	PINNIXA OCCIDENTALIS	.5		1	.001		.0030					
	PRIAPULUS CAUDATUS	.5	1		.001	.0030						
	AMPHIURIDAE	3.5	4	3	.001	.0010	.0020					
TOT:		1241.0	1504	978	9.250	10.4638	8.0364	45	36	36	35	7.9
E03	NEMERTEA	1.0	1	1	.010	.0180	.0020					
	PHOLOE MINUTA	1.5	1	2	.004	.0030	.0050					
	ETEONE PACIFICA	1.0		2	.002		.0050					
	ETEONE LONGA	14.5	13	16	.031	.0240	.0380					
	GYPTIS BREVIPALPA	.5	1		.000	.0004						
	OPHIODROMUS PUGETTENSIS	31.5	46	17	.189	.3080	.0710					
	NEREIS SP.	.5	1		.000	.0004						
	NEPHTYS LONGOSETOSA	8.0	13	3	.021	.0400	.0020					
	GLYCINDE PICTA	43.0	54	32	.735	1.0090	.4610					
	LUMBRINERIS SP.	4.0	7	1	.012	.0230	.0010					
	DORVILLEA ANNULATA	508.5	541	476	1.021	1.1150	.9270	1		1	1	
	POLYDORA SOCIALIS	3.0	5	1	.004	.0070	.0010					
	PRIONOSPIO CIRRIFERA	5.0		10	.005		.0100					
	THARYX SP.	1036.0	976	1096	1.805	1.9390	1.6720	1		1	1	
	COSSURA SOYERI	17.5	7	28	.001	.0004	.0020					
	CAPITELLA SP.	1.5	1	2	.001	.0010	.0004					
	MEDIOMASTUS CALIFORNIENSI	6.5	6	7	.002	.0030	.0010					
	EUCLYMENINAE	.5	1		.000	.0004						
	OWENIA FUSIFORMIS	10.5	14	7	.046	.0660	.0270					

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1".
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT IN A REPLICATE.

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
	PECTINARIA GRANULATA	.5		1	.003		.0060					
	AMPHARETE LABROPS	1.0	2		.001	.0020						
	TEREBELLIDES STROEMI	9.5	10	9	.011	.0100	.0120					
	ALVINIA SP.	5.0	10		.003	.0070						
	MODIOLUS RECTUS	1.0		2	.000		.0010					
	AXINOPSIDA SERRICATA	11.0	11	11	.043	.0330	.0530					
	MYSELLA TUMIDA	43.0	50	36	.127	.0680	.1860					
	MACOMA SP.	12.0	17	7	.825	1.5700	.0810					
	MACOMA NASUTA	1.5	1	2	4.542	4.9240	4.1610					
	TELLINA CARPENTERI	1.5	2	1	.003	.0040	.0030					
	PSEPHIDIA LORDI	1.0	2		.001	.0030						
	EUDORELLA SP.	12.0	22	2	.005	.0090	.0020					
	DIASTYLIS SP.	5.0	9	1	.017	.0300	.0050					
	PHOTIS SP.	.5		1	.001		.0020					
	PROTOMEDEIA SP.	.5		1	.000		.0010					
	UPOGEBIA PUGETTENSIS	1.0		2	.918		1.8370					
	CALLIANASSA CALIFORNIENSI	1.0	1	1	12.043	3.8740	20.2120					
	BRACHYURA (JUVENILES)	14.0	18	10	.013	.0190	.0080					
	PINNIXA OCCIDENTALIS	5.0	6	4	.058	.0680	.0490					
	SCLEROPLAX GRANULATA	10.5	9	12	.061	.0510	.0710					
	PRIAPULUS CAUDATUS	.5	1		.015	.0310						
TOT:		1831.5	1859	1804	22.588	15.2606	29.9154	40	33	33	33	4.5
E04	ETEONE LONGA	.5	1		.001	.0020						
	GYPTIS BREVIPALPA	1.5	1	2	.002	.0010	.0030					
	OPHIODROMUS PUGETTENSIS	2.5	3	2	.008	.0040	.0130					
	NEPHTYS LONGOSETOSA	6.5	4	9	.014	.0130	.0160					
	GLYCINDE PICTA	13.0	16	10	.363	.3760	.3510					
	DORVILLEA SP.	10.0	8	12	.031	.0150	.0470					
	PARAPRIONOSPIO PINNATA	1.5	3		.055	.1110						
	THARYX SP.	408.0	501	315	1.743	1.9130	1.5740	1		1	1	
	SCALIBREGMA INFLATUM	.5		1	.013		.0260					
	ARMANDIA BREVIS	.5		1	.002		.0050					
	CAPITELLA SP.	.5		1	.000		.0004					
	AMPHARETE LABROPS	.5	1		.005	.0100						
	AMPHARETE FINMARCHICA	1.0	1	1	.002	.0020	.0030					
	MACOMA SP.	13.0	15	11	3.860	7.4910	.2300					
	MACOMA NASUTA	2.5		5	2.571		5.1430					
	NEBALIA PUGETTENSIS	2.0	3	1	.001	.0010	.0004					
	EUDORELLA SP.	.5	1		.000	.0010						
	DIASTYLIS SP.	1.5	2	1	.003	.0020	.0040					
	WESTWOODILLA CAECULA	.5	1		.000	.0004						

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL: TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1".
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT IN A REPLICATE.

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
	BRACHYURA (JUVENILES)	1.5	3		.001	.0020						
TOT:		468.0	564	372	8.680	9.9444	7.4158	20	15	16	14	11.5
E06	NEMERTEA	4.0	2	6	.052	.0370	.0670					
	PHOLOE MINUTA	9.0	9	9	.011	.0110	.0120					
	ETEONE LONGA	44.0	48	40	.104	.0160	.1930					
	GYPTIS BREVIPALPA	2.0	4		.008	.0170						
	OPHIODROMUS PUGETTENSIS	11.5	6	17	.046	.0200	.0720					
	NEREIS BRANDTI	.5	1		3.184	6.3680						
	NEREIS PROCERA	.5	1		.001	.0020						
	NEPHTYS LONGOSETOSA	9.0	12	6	.005	.0090	.0020					
	GLYCERA CAPITATA	.5		1	.001		.0030					
	GLYCINDE PICTA	55.5	66	45	.694	.6400	.7490					
	LUMBRINERIS SP.	6.5	2	11	.050	.0270	.0740					
	DORVILLEA SP.	1.5		3	.005		.0100					
	DORVILLEA ANNULATA	2.0	4		.007	.0150						
	TAUBERIA GRACILIS	.5	1		.000	.0004						
	PRIONOSPIO STEENSTRUPI	1.5	1	2	.001	.0010	.0004					
	PARAPRIONOSPIO PINNATA	4.0	7	1	.112	.2120	.0120					
	CIRRATULUS CIRRATUS	15.5	22	9	.011	.0180	.0050					
	THARYX SP.	1466.0	1270	1662	3.281	2.8390	3.7240	1		1	1	
	CHAETOZONE SP.	.5	1		.000	.0004						
	CAPITELLA SP.	11.5	10	13	.003	.0030	.0040					
	HETEROMASTUS FILOBRANCHUS	1.5	2	1	.336	.4850	.1870					
	MEDIOMASTUS CALIFORNIENSI	1.0		2	.000		.0010					
	PRAXILLELLA AFFINIS	.5	1		.000	.0004						
	EUCLYMENINAE	1.5		3	.000		.0004					
	OWENIA FUSIFORMIS	4.5	8	1	.001	.0010	.0004					
	PECTINARIA GRANULATA	1.0		2	.013		.0260					
	AMPHARETE FINMARCHICA	2.0		4	.001		.0020					
	AMPHICTEIS SCAPHOBRANCHIA	3.0	5	1	.146	.1780	.1140					
	MELINNA ELISABETHAE	3.0	3	3	.002	.0030	.0010					
	ASABELLIDES SIBIRICA	1.0		2	.000		.0010					
	PISTA CRISTATA	5.0	1	9	.081	.0160	.1470					
	TEREBELLIDES STROEMI	11.5	13	10	.005	.0080	.0020					
	ALVINIA SP.	61.5	47	76	.086	.0660	.1060					
	TURBONILLA SP.	5.5	6	5	.004	.0030	.0060					
	AXINOPSIDA SERRICATA	43.0	49	37	.089	.0730	.1060					
	MYSELLA TUMIDA	2.0	3	1	.001	.0010	.0010					
	CLINOCARDIUM SP.	1.0		2	.018		.0360					
	MACOMA SP.	8.5	10	7	.137	.0930	.1820					
	TRANSENNELLA TANTILLA	10.5	21		.009	.0180						

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1".
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT IN A REPLICATE.

5)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
	SAXIDOMUS GIGANTEUS	.5	1		.002	.0040						
	PSEPHIDIA LORDI	42.5		85	.034		.0680					
	MYA ARENARIA	.5		1	.041		.0830					
	LYONSIA CALIFORNICA	.5		1	.001		.0030					
	MYODOCOPA	23.5	9	38	.022	.0060	.0390					
	EUDORELLA SP.	15.5	19	12	.003	.0030	.0030					
	DIASTYLIS SP.	2.0		4	.005		.0110					
	MUNNOGONIUM WALDRONENSE	2.5	1	4	.001	.0004	.0010					
	PHOTIS SP.	2.5	2	3	.003	.0020	.0040					
	PROTOMEDEIA SP.	12.5	19	6	.035	.0540	.0160					
	WESTWOODILLA CAECULA	3.0	4	2	.004	.0030	.0050					
	TRITELLA PILIMANA	.5		1	.000		.0004					
	BRACHYURA (JUVENILES)	26.5	28	25	.016	.0130	.0190					
	PINNIXA OCCIDENTALIS	4.5	5	4	.024	.0290	.0190					
	PRIAPULUS CAUDATUS	.5	1		.010	.0210						
TOT:		1951.0	1725	2177	8.717	11.3166	6.1176	54	43	41	44	12.3
E07	NEPHTYS LONGOSETOSA	.5		1	.001		.0030					
	GLYCINDE PICTA	3.0	5	1	.080	.1580	.0020					
	DORVILLEA SP.	.5	1		.000	.0010						
	PARAPRIONOSPIO PINNATA	.5	1		.001	.0030						
	THARYX SP.	153.5	233	74	.961	1.6030	.3200	1		1	1	
	CLINOCARDIUM SP.	.5		1	.041		.0830					
	MACOMA SP.	2.0	3	1	.183	.3550	.0120					
	DIASTYLIS SP.	.5	1		.000	.0010						
	CRANGON FRANCISCORUM	.5	1		.297	.5940						
	BRACHYURA (JUVENILES)	1.0		2	.001		.0030					
TOT:		162.5	245	80	1.569	2.7150	.4230	10	7	7	6	11.3
E08	NEMERTEA	2.5	2	3	.020	.0070	.0340					
	PHOLOE MINUTA	1.0	2		.000	.0010						
	ANAITIDES MACULATA	1.0		2	.006		.0120					
	ETEONE LONGA	15.5	21	10	.063	.0870	.0400					
	EULALIA NIGRIMACULATA	1.5		3	.004		.0090					
	GYPTIS BREVIPALPA	1.0	2		.000	.0010						
	OPHIODROMUS PUGETTENSIS	4.0	7	1	.034	.0590	.0090					
	NEREIS PROCERA	1.5	2	1	.012	.0210	.0030					
	NEPHTYS LONGOSETOSA	.5	1		.000	.0010						
	NEPHTYS FERRUGINEA	.5		1	2.311		4.6220					
	GLYCINDE PICTA	25.0	33	17	.217	.2540	.1810					
	ONUPHIS IRIDESCENS	.5		1	.004		.0090					

A: E05 AND E10 NOT PROCESSED.
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C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1".
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT IN A REPLICATE.

```
            BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                   COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TAXON                             MEAN REP 1 REP 2    MEAN     REP 1    REP 2 TOTAL MEAN REP1 REP2 DPTH
TION                                  COUNT COUNT COUNT   WEIGHT   WEIGHT   WEIGHT   NSP NSP   NSP  NSP  (M)
                                     #/0.1M2             G/0.1M2  (SEE B)           SEE C

     LUMBRINERIS SP.                    2.5     4     1    .011    .0160    .0060
     POLYDORA SOCIALIS                  1.0           2    .005             .0100
     POLYDORA CARDALIA                  2.5     2     3    .055    .0400    .0700
     THARYX SP.                      1555.0  1920  1270   2.400   2.4620   2.3380    1          1    1
     COSSURA SOYERI                      .5     1          .000    .0004
     CAPITELLA SP.                      2.0     2     2    .001    .0010    .0020
     HETEROMASTUS FILIFORMIS            1.0           2    .005             .0100
     HETEROMASTUS FILOBRANCHUS          2.5     2     3    .034    .0550    .0140
     EUCLYMENINAE                       5.5     5     6    .014    .0040    .0250
     OWENIA FUSIFORMIS                 40.5    61    20    .068    .1020    .0350
     PECTINARIA GRANULATA               1.5     2     1    .050    .0910    .0090
     AMAGE ANOPS                         .5           1    .022             .0450
     AMPHARETE LABROPS                   .5     1          .003    .0070
     AMPHARETE FINMARCHICA               .5     1          .000    .0010
     AMPHICTEIS SCAPHOBRANCHIA          1.5     2     1    .069    .0630    .0760
     MELINNA ELISABETHAE                4.0     5     3    .037    .0390    .0350
     PISTA CRISTATA                     1.5     3          .004    .0080
     POLYCIRRUS SP.                      .5           1    .005             .0110
     TEREBELLIDES STROEMI               7.5    15          .004    .0080
     POTAMILLA OCELLATA                 4.5     2     7    .013    .0070    .0190
     ALVINIA SP.                       14.5    29          .014    .0280
     ODOSTOMIA SP.                      1.0           2    .002             .0040
     TURBONILLA SP.                     3.5     7          .004    .0080
     CYLICHNA SP.                        .5     1          .000    .0004
     GASTROPTERON PACIFICUM              .5     1          .002    .0040
     AXINOPSIDA SERRICATA              43.5    61    26    .038    .0410    .0360
     MYSELLA TUMIDA                      .5     1          .000    .0004
     MACOMA SP.                         8.0    14     2    .047    .0460    .0490
     SAXIDOMUS GIGANTEUS                 .5           1    .921            1.8420
     PSEPHIDIA LORDI                   11.5    12    11    .059    .0350    .0830
     MYA ARENARIA                       4.5     4     5    .922    .7790   1.0660
     LYONSIA CALIFORNICA                1.0     1     1    .002    .0004    .0040
     MYODOCOPA                         17.5    28     7    .015    .0210    .0090
     EUDORELLA SP.                      7.0     7     7    .004    .0060    .0030
     DIASTYLIS SP.                      3.5     6     1    .010    .0180    .0020
     MUNNOGONIUM WALDRONENSE            1.0     2          .000    .0010
     PROTOMEDEIA SP.                   71.0   102    40    .173    .2190    .1270
     WESTWOODILLA CAECULA                .5     1          .000    .0004
     DULICHIA SP.                       1.0     1     1    .001    .0004    .0010
     CRANGON NIGRICAUDA                  .5     1          .001    .0030
     BRACHYURA (JUVENILES)             33.5    54    13    .028    .0490    .0080
     PUGETTIA GRACILIS                   .5           1    .003             .0060
     PINNIXA OCCIDENTALIS               6.0     8     4    .043    .0540    .0320

                                                      A: E05 AND E10 NOT PROCESSED.
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                                                      C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                                         MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
                                                         DOMINANT TAXA ARE FLAGGED WITH A "1".
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                                                         10% OF THE TOTAL COUNT IN A REPLICATE.
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
	AMPHIURIDAE	10.5	20	1	.455	.9070	.0040					
TOT:		1972.0	2459	1485	9.228	5.5564	10.9000	56	43	45	40	13.6
E09	HALCAMPA DECEMTENTACULATA	.5		1	.022		.0450					
	NEMERTEA	5.0	6	4	.181	.0570	.3060					
	EUNOE UNISERIATA	.5	1		.001	.0020						
	PHOLOE MINUTA	4.5	4	5	.004	.0030	.0060					
	ETEONE LONGA	2.5	1	4	.004	.0010	.0080					
	GYPTIS BREVIPALPA	1.0	2		.000	.0010						
	OPHIODROMUS PUGETTENSIS	.5		1	.000		.0010					
	NEPHTYS LONGOSETOSA	2.5	3	2	.001	.0020	.0010					
	GLYCERA CAPITATA	.5		1	.159		.3190					
	GLYCINDE PICTA	25.0	25	25	.563	.6770	.4490	1		1		
	LUMBRINERIS SP.	1.0	1	1	.001	.0010	.0010					
	POLYDORA CARDALIA	.5		1	.021		.0430					
	PRIONOSPIO STEENSTRUPI	.5		1	.000		.0010					
	SPIOPHANES BERKELEYORUM	1.0	2		.000	.0010						
	PARAPRIONOSPIO PINNATA	1.5	2	1	.006	.0110	.0004					
	CIRRATULUS CIRRATUS	.5	1		.000	.0010						
	THARYX SP.	12.0	3	21	.011	.0050	.0180					
	HETEROMASTUS FILOBRANCHUS	1.5	1	2	.353	.6910	.0150					
	MEDIOMASTUS CALIFORNIENSI	.5	1		.000	.0004						
	PRAXILLELLA AFFINIS	.5		1	.000		.0004					
	EUCLYMENINAE	.5		1	.000		.0004					
	PECTINARIA GRANULATA	1.0	1	1	.001	.0004	.0020					
	AMPHICTEIS SCAPHOBRANCHIA	1.0		2	.279		.5580					
	PISTA CRISTATA	1.0	1	1	.001	.0010	.0020					
	TEREBELLIDES STROEMI	2.0		4	.005		.0110					
	EUCHONE INCOLOR	.5		1	.000		.0004					
	ODOSTOMIA SP.	1.5		3	.000		.0010					
	CYLICHNA SP.	5.0	2	8	.053	.0430	.0630					
	GASTROPTERON PACIFICUM	.5		1	.002		.0050					
	NUCULA TENUIS	2.5	1	4	.098	.0660	.1300					
	AXINOPSIDA SERRICATA	52.5	25	80	.376	.2470	.5050	1		1	1	
	MYSELLA TUMIDA	2.0	1	3	.003	.0020	.0040					
	CLINOCARDIUM SP.	.5		1	.004		.0090					
	MACOMA SP.	12.0	11	13	.069	.0800	.0580					
	MACOMA NASUTA	.5	1		1.213	2.4270						
	PSEPHIDIA LORDI	30.0	17	43	.242	.1780	.3070	1			1	
	MYA ARENARIA	1.5		3	.134		.2690					
	MYODOCOPA	17.5	15	20	.012	.0110	.0130					
	EUDORELLA SP.	55.0	47	71	.038	.0310	.0460	1		1	1	

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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
	PHOTIS SP.	1.0	1	1	.001	.0020	.0004					
	PROTOMEDEIA SP.	2.0	3	1	.002	.0030	.0020					
	WESTWOODILLA CAECULA	.5		1	.000		.0010					
	HETEROPHOXUS OCULATUS	1.0		2	.000		.0010					
	FOXIPHALUS COGNATUS	.5	1		.001	.0020						
	BRACHYURA (JUVENILES)	9.0	8	10	.005	.0040	.0060					
	PINNIXA OCCIDENTALIS	1.5	1	2	.003	.0030	.0030					
	AMPHIURIDAE	3.0	1	5	.033	.0360	.0310					
TOT:		271.5	190	353	3.916	4.5858	3.2420	47	36	31	40	13.6
E11	HALCAMPA DECEMTENTACULATA	.5		1	.155		.3110					
	PLATYHELMINTHES	.5	1		.003	.0070						
	NEMERTEA	1.5		3	.854		1.7080					
	HARMOTHOE LUNULATA	.5	1		.005	.0110						
	PHOLOE MINUTA	4.5	5	4	.012	.0090	.0160					
	STHENELAIS TERTIAGLABRA	.5		1	.029		.0590					
	ETEONE LONGA	1.0		2	.001		.0020					
	OPHIODROMUS PUGETTENSIS	2.0		4	.005		.0100					
	PILARGIS BERKELEYAE	.5		1	.004		.0090					
	NEREIS PROCERA	.5		1	.016		.0320					
	GLYCERA CAPITATA	.5		1	.060		.1200					
	GLYCINDE PICTA	1.5	2	1	.025	.0300	.0210					
	GONIADA MACULATA	1.0		2	.117		.2350					
	ONUPHIS IRIDESCENS	.5		1	.471		.9420					
	LUMBRINERIS SP.	12.5	8	17	.110	.1060	.1140					
	SCOLOPLOS PUGETTENSIS	1.5		3	.023		.0460					
	TAUBERIA GRACILIS	7.5		15	.001		.0030					
	LAONICE CIRRATA	3.5	2	5	.242	.2340	.2510					
	PRIONOSPIO CIRRIFERA	1.5	1	2	.001	.0020	.0010					
	PRIONOSPIO STEENSTRUPI	1.0	2		.001	.0020						
	SPIOPHANES BERKELEYORUM	.5		1	.000		.0004					
	PARAPRIONOSPIO PINNATA	3.0	1	5	.219	.0840	.3540					
	MAGELONA SP.	4.5		9	.031		.0620					
	THARYX SP.	2.0	1	3	.007	.0010	.0140					
	SCALIBREGMA INFLATUM	.5		1	.001		.0020					
	AMMOTRYPANE AULOGASTER	.5		1	.082		.1640					
	STERNASPIS SCUTATA	1.0		2	.153		.3060					
	HETEROMASTUS FILIFORMIS	4.5		9	.002		.0040					
	MEDIOMASTUS SP.	1.0	2		.000	.0010						
	BARANTOLLA AMERICANA	.5		1	.034		.0680					
	MALDANE GLEBIFLEX	.5	1		.001	.0030						
	PRAXILLELLA AFFINIS	4.5		9	1.010		2.0210					

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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
	OWENIA FUSIFORMIS	31.0	31	31	.139	.0540	.2250					
	PECTINARIA GRANULATA	.5		1	.000		.0010					
	AMPHARETE FINMARCHICA	.5		1	.002		.0050					
	MELINNA ELISABETHAE	.5		1	.010		.0210					
	POLYCIRRUS SP.	.5		1	.002		.0040					
	ODOSTOMIA SP.	.5	1		.001	.0020						
	NUCULA TENUIS	2.5	4	1	.025	.0490	.0010					
	NUCULANA MINUTA	.5	1		.000	.0010						
	YOLDIA SCISSURATA	2.0	3	1	1.148	2.2450	.0520					
	AXINOPSIDA SERRICATA	.5		1	.001		.0030					
	MYSELLA TUMIDA	2.0	4		.001	.0030						
	SOLEN SICARIUS	.5		1	4.590		9.1800					
	MACOMA SP.	1.5	1	2	.001	.0004	.0020					
	TELLINA CARPENTERI	.5		1	.006		.0130					
	PSEPHIDIA LORDI	.5	1		.000	.0004						
	MYODOCOPA	55.0	68	50	.021	.0210	.0220	1		1		
	EUDORELLA SP.	65.5	121	10	.034	.0600	.0090	1		1		
	AMPELISCA AGASSIZI	.5		1	.000		.0010					
	PONTOPOREIA FEMORATA	.5	1		.000	.0010						
	PROTOMEDEIA SP.	10.5	19	2	.021	.0380	.0040					
	LYSIANASSIDAE	1.0		2	.000		.0010					
	ORCHOMENE SP.	6.0	12		.008	.0170						
	WESTWOODILLA CAECULA	1.5	1	2	.001	.0010	.0010					
	PHOXOCEPHALIDAE	2.0		4	.002		.0040					
	HETEROPHOXUS OCULATUS	17.5	27	8	.028	.0360	.0200					
	FOXIPHALUS COGNATUS	1.5	3		.000	.0010						
	RHEPOXYNIUS SP.	4.5		9	.002		.0050					
	DULICHIA SP.	.5	1		.000	.0004						
	BRACHYURA (JUVENILES)	139.0	84	194	.119	.0690	.1700	1		1	1	
	PINNIXA OCCIDENTALIS	23.5	11	36	.094	.0410	.1480					
	SIPUNCULA	.5		1	.010		.0210					
	PRIAPULUS CAUDATUS	.5		1	.077		.1540					
	AMPHIURIDAE	53.0	48	58	4.859	5.2240	4.4940	1		1	1	
	PENTAMERA POPULIFERA	3.5	3	4	1.227	.2390	2.2150					
TOT:		500.5	472	529	16.122	8.5932	23.6504	66	43	33	53	14.8
E12	HALCAMPA DECEMTENTACULATA	.5	1		.004	.0080						
	NEMERTEA	.5		1	.014		.0280					
	PHOLOE MINUTA	1.0	1	1	.004	.0050	.0040					
	ANAITIDES MACULATA	1.0	2		.004	.0090						
	ANAITIDES MULTISERIATA	.5	1		.003	.0070						
	NEPHTYS LONGOSETOSA	1.0	1	1	.004	.0030	.0050					

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              BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                       COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TAXON                               MEAN REP 1 REP 2    MEAN    REP 1    REP 2 TOTAL MEAN REP1 REP2 DPTH
TION                                    COUNT COUNT COUNT  WEIGHT   WEIGHT   WEIGHT   NSP NSP   NSP  NSP (M)
                                      #/0.1M2            G/0.1M2 (SEE B)           SEE C

     GLYCINDE PICTA                       2.0     2     2    .276    .1530    .3990
     LUMBRINERIS SP.                      6.5     6     7    .040    .0250    .0560
     TAUBERIA GRACILIS                    2.0     2     2    .001    .0010    .0010
     PRIONOSPIO CIRRIFERA                 4.0           8    .002             .0040
     PRIONOSPIO STEENSTRUPI               1.0     2          .000    .0010
     PARAPRIONOSPIO PINNATA               1.0           2    .132             .2640
     SCALIBREGMA INFLATUM                  .5     1          .003    .0070
     ARMANDIA BREVIS                      7.0    12     2    .009    .0130    .0050
     OWENIA FUSIFORMIS                    2.0     2     2    .010    .0100    .0110
     TEREBELLIDES STROEMI                  .5     1          .001    .0030
     CYLICHNA SP.                         1.5     2     1    .086    .1410    .0310
     ACILA CASTRENSIS                     1.5     3          .345    .6900
     NUCULA TENUIS                         .5     1          .010    .0210
     NUCULANA MINUTA                       .5     1          .003    .0060
     AXINOPSIDA SERRICATA                 1.0     2          .006    .0130
     MYSELLA TUMIDA                       1.0     2          .004    .0090
     MACOMA NASUTA                        1.0     2          .752   1.5050
     TRANSENNELLA TANTILLA                 .5     1          .001    .0030
     PSEPHIDIA LORDI                     28.0    33    23    .026    .0100    .0430     1          1    1
     LYONSIA CALIFORNICA                   .5     1          .006    .0130
     MYODOCOPA                            7.0     9     5    .003    .0060    .0004
     MYSIDACEA                             .5           1    .001             .0020
     EUDORELLA SP.                       27.0    37    17    .016    .0210    .0110     1          1    1
     AMPELISCA SP.                         .5           1    .002             .0040
     PONTOPOREIA FEMORATA                 8.5    14     3    .005    .0090    .0020
     PROTOMEDEIA SP.                      8.0    15     1    .012    .0230    .0010
     ORCHOMENE SP.                        9.5    19          .007    .0150
     HETEROPHOXUS OCULATUS               18.0    23    13    .031    .0500    .0120
     CRANGON SP.                           .5     1          .003    .0070
     BRACHYURA (JUVENILES)               59.5    81    38    .047    .0710    .0230     1          1    1
     PINNIXA OCCIDENTALIS                 5.5     6     5    .025    .0370    .0140
     AMPHIURIDAE                         21.5    22    21   2.146   1.6080   2.6850     1               1

TOT:                                    233.0   309   157   4.054   4.5030   3.6054    38   28   33   22 16.1

L01  HALCAMPA DECEMTENTACULATA             .5     1          .018    .0370
     PLATYHELMINTHES                      3.0     2     4    .012    .0070    .0170
     NEMERTEA                             7.0     8     6    .074    .0380    .1100
     TENONIA KITSAPENSIS                  4.0     3     5    .003    .0030    .0040
     PHOLOE MINUTA                        8.0     9     7    .021    .0330    .0090
     ETEONE LONGA                         6.5    10     3    .003    .0050    .0020
     EULALIA SP.                           .5     1          .000    .0010
     EULALIA NIGRIMACULATA                 .5           1    .001             .0020

                                                   A: E05 AND E10 NOT PROCESSED.
                                                   B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN
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                                                      MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
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                 BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                          COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TAXON                          MEAN REF 1 REP 2    MEAN   REP 1   REP 2 TOTAL MEAN REP1 REP2 DPTH
TION                               COUNT COUNT COUNT  WEIGHT  WEIGHT  WEIGHT   NSP  NSP  NSP  NSP  (M)
                                 #/0.1M2             G/0.1M2 (SEE B)          SEE C

     GYPTIS BREVIPALPA               2.0     1     3    .009   .0110   .0070
     OPHIODROMUS PUGETTENSIS          .5     1          .004   .0080
     PLATYNEREIS BICANALICULAT        .5     1          .005   .0110
     NEPHTYS LONGOSETOSA             3.0           6    .002           .0040
     GLYCINDE PICTA                 35.0    21    49    .276   .0950   .4570
     ONUPHIS SP.                     1.0     2          .000   .0004
     LUMBRINERIS SP.                 5.0     2     8    .026   .0020   .0500
     DORVILLEA ANNULATA              4.0           8    .005           .0110
     POLYDORA CARDALIA                .5     1          .022   .0440
     PRIONOSPIO CIRRIFERA            1.0           2    .000           .0004
     PRIONOSPIO STEENSTRUPI          1.0     1     1    .001   .0010   .0004
     SPIOPHANES SP.                   .5     1          .002   .0004
     SPIOPHANES BERKELEYORUM          .5           1    .021           .0430
     PARAPRIONOSPIO PINNATA          5.0     7     3    .152   .2840   .0210
     CIRRATULUS CIRRATUS             1.0     2          .008   .0160
     THARYX SP.                    809.5   836   783   1.545  1.4020  1.6890     1         1
     COSSURA SOYERI                  2.0           4    .000           .0010
     CAPITELLA SP.                    .5           1    .000           .0004
     HETEROMASTUS FILOBRANCHUS       5.5     5     6    .037   .0510   .0240
     MEDIOMASTUS CALIFORNIENSI        .5           1    .000           .0010
     EUCLYMENINAE                     .5     1          .001   .0020
     OWENIA FUSIFORMIS            7705.5  2826 12585   8.309  5.6560 10.9630     1         1    1
     PECTINARIA GRANULATA            3.0     5     1    .031   .0610   .0010
     AMPHARETE LABROPS               4.5     7     2    .048   .0800   .0170
     EPITONIUM TINCTUM                .5     1          .006   .0130
     NASSARIUS MENDICUS               .5     1          .199   .3980
     ODOSTOMIA SP.                   2.5     1     4    .011   .0090   .0130
     CYLICHNA SP.                     .5     1          .029   .0580
     AGLAJA DIOMEDEA                 9.0     5    13    .069   .0170   .1220
     YOLDIA SCISSURATA               1.0           2    .009           .0180
     AXINOPSIDA SERRICATA           14.0    14    14    .072   .0640   .0800
     MYSELLA TUMIDA                  5.0     3     7    .003   .0020   .0050
     MACOMA SP.                      7.5     4    11    .284   .0250   .5440
     MACOMA NASUTA                   3.0     4     2    .878   .7970   .9590
     TELLINA CARPENTERI              3.5     3     4    .017   .0110   .0230
     PSEPHIDIA LORDI                 6.5     4     9    .139   .1670   .1110
     MYA TRUNCATA                     .5           1    .066           .1330
     MYODOCOPA                       1.0     1     1    .001   .0010   .0004
     DIASTYLIS SP.                   1.0     2          .001   .0030
     PROTOMEDEIA SP.                26.5    24    29    .034   .0340   .0350
     HETEROPHOXUS OCULATUS           1.5     2     1    .002   .0040   .0010
     FOXIPHALUS COGNATUS              .5     1          .000   .0010
     PINNIXA OCCIDENTALIS            1.0     2          .006   .0120

                                                 A: E05 AND E10 NOT PROCESSED.
                                                 B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN
                                                    VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.
                                                 C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                                    MEAN: MEAN # OF TAXA IN 2 REPLICATES.
                                                    DOMINANT TAXA ARE FLAGGED WITH A "1".
                                                    A DOMINANT TAXON IS ONE COMPRISING AT LEAST
                                                    10% OF THE TOTAL COUNT IN A REPLICATE.
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                       BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                                COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TAXON                             MEAN REP 1 REP 2    MEAN    REP 1    REP 2 TOTAL MEAN REP1 REP2 DPTH
TION                                  COUNT COUNT COUNT  WEIGHT   WEIGHT   WEIGHT   NSP NSP   NSP  NSP (M)
                                    #/0.1M2             G/0.1M2 (SEE B)          SEE C

     PHORONIDA                           .5           1    .001             .0020
     AMPHIURIDAE                        7.0     8     6    .066    .0940    .0390

TOT:                                 8715.0  3835 13595  12.539   5.5588  15.5196    53   41   43   38  7.6

L02  PLATYHELMINTHES                    1.5     3          .004    .0090
     NEMERTEA                           3.5     1     6    .369    .0230    .7160
     TENONIA KITSAPENSIS                2.5     3     2    .003    .0040    .0030
     PHOLOE MINUTA                      1.5     1     2    .003    .0020    .0050
     ETEONE LONGA                       1.5     1     2    .005    .0040    .0060
     OPHIODROMUS PUGETTENSIS            1.0           2    .002             .0050
     GLYCINDE PICTA                     6.5     7     6    .123    .1860    .0600
     LUMBRINERIS SP.                    5.0     6     4    .081    .0840    .0790
     LUMBRINERIS BICIRRATA              1.0     2         1.375   2.7500
     POLYDORA SOCIALIS                   .5           1    .000             .0010
     PRIONOSPIO STEENSTRUPI              .5           1    .000             .0010
     POLYDORA PROBOSCIDEA                .5     1          .014    .0280
     SPIOPHANES BERKELEYORUM             .5     1          .000    .0004
     PARAPRIONOSPIO PINNATA             1.5     1     2    .075    .0010    .1500
     TROCHOCHAETA MULTISETOSA            .5     1          .002    .0040
     THARYX SP.                       379.0   310   448   1.601   1.3030   1.9000     1         1    1
     HETEROMASTUS FILOBRANCHUS           .5           1    .000             .0004
     MALDANE GLEBIFLEX                   .5     1          .007    .0150
     EUCLYMENE ZONALIS                   .5           1    .000             .0004
     EUCLYMENINAE                       5.0     3     7    .107    .0560    .1590
     OWENIA FUSIFORMIS                463.0   324   602    .191    .1000    .2820     1         1    1
     PECTINARIA GRANULATA               1.0     2          .001    .0020
     MELINNA ELISABETHAE                 .5     1          .001    .0020
     POTAMILLA INTERMEDIA                .5           1    .001             .0020
     MITRELLA SP.                       1.5           3    .151             .3030
     OENOPOTA LEVIDENSUS                 .5           1    .007             .0150
     ODOSTOMIA SP.                      8.5     8     9    .051    .0400    .0620
     TURBONILLA SP.                     2.5     5          .008    .0160
     CYLICHNA SP.                       3.0     4     2    .068    .0810    .0550
     AGLAJA DIOMEDEA                     .5     1          .001    .0020
     NUCULA TENUIS                      1.5           3    .005             .0100
     YOLDIA SCISSURATA                   .5           1    .003             .0070
     AXINOPSIDA SERRICATA               2.5           5    .018             .0360
     MYSELLA TUMIDA                      .5     1          .000    .0010
     MACOMA NASUTA                       .5           1    .050             .1000
     PSEPHIDIA LORDI                   34.0    40    28    .761    .8740    .6490
     HUMILARIA KENNERLYI                 .5     1        13.872  27.7440
     MYODOCOPA                         33.5    49    18    .022    .0260    .0190

                                                        A: E05 AND E10 NOT PROCESSED.
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                                                           VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.
                                                        C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                                           MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
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                                                           A DOMINANT TAXON IS ONE COMPRISING AT LEAST
                                                           10% OF THE TOTAL COUNT IN A REPLICATE.
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
	EUDORELLA SP.	4.0		8	.001		.0030					
	DIASTYLIS SP.	1.0	1	1	.002	.0010	.0030					
	PROTOMEDEIA SP.	51.0	64	38	.102	.1380	.0670					
	HETEROPHOXUS OCULATUS	3.5	2	5	.003	.0050	.0020					
	FOXIPHALUS COGNATUS	.5		1	.000		.0010					
	PINNIXA OCCIDENTALIS	30.5	34	27	.284	.3500	.2180					
	PRIAPULUS CAUDATUS	1.0	2		1.842	3.6850						
	AMPHIURIDAE	30.0	21	39	.414	.2790	.5500					
	MOLPADIA INTERMEDIA	.5		1	13.276		26.5520					
TOT:		1090.5	902	1279	34.919	37.8154	32.0218	47	33	32	34	10.7
L03	PLATYHELMINTHES	2.0	3	1	.008	.0150	.0010					
	NEMERTEA	1.0	1	1	.007	.0120	.0030					
	POLYEUNOA TUTA	.5	1		.085	.1710						
	TENONIA KITSAPENSIS	1.5	3		.003	.0070						
	PHOLOE MINUTA	3.0	3	3	.013	.0170	.0090					
	ETEONE LONGA	1.0	1	1	.003	.0010	.0050					
	GYPTIS BREVIPALPA	2.5	5		.001	.0030						
	NEREIS PROCERA	.5		1	.024		.0490					
	NEPHTYS LONGOSETOSA	1.0	1	1	.001	.0020	.0010					
	GLYCINDE PICTA	7.5	14	1	.329	.6550	.0030					
	LUMBRINERIS SP.	1.0	1	1	.010	.0180	.0020					
	DORVILLEA SP.	5.5	11		.019	.0380						
	PRIONOSPIO CIRRIFERA	.5	1		.000	.0010						
	POLYDORA PROBOSCIDEA	.5	1		.085	.1700						
	SPIOPHANES BERKELEYORUM	3.5	4	3	.064	.0510	.0770					
	PARAPRIONOSPIO PINNATA	.5		1	.001		.0030					
	CIRRATULUS CIRRATUS	.5	1		.001	.0030						
	THARYX SP.	448.0	295	601	1.561	1.1350	1.9870	1		1	1	
	ARMANDIA BREVIS	.5	1		.000	.0004						
	STERNASPIS SCUTATA	.5	1		.001	.0020						
	HETEROMASTUS FILOBRANCHUS	1.0	2		.012	.0250						
	OWENIA FUSIFORMIS	1.5	3		.001	.0020						
	PECTINARIA GRANULATA	.5		1	.001		.0020					
	EUPOLYMNIA HETEROBRANCHIA	.5	1		1.757	3.5140						
	MYXICOLA AESTHETICA	.5	1		.494	.9890						
	POTAMILLA INTERMEDIA	.5	1		.088	.1770						
	SABELLA MEDIA	1.0	2		.970	1.9400						
	NASSARIUS MENDICUS	1.0	2		.318	.6360						
	ODOSTOMIA SP.	7.5	5	10	.028	.0130	.0440					
	TURBONILLA SP.	4.0	4	4	.025	.0280	.0230					
	CYLICHNA SP.	1.5	1	2	.045	.0200	.0700					

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.
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DOMINANT TAXA ARE FLAGGED WITH A "1".
A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT IN A REPLICATE.

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STATION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
	NUCULANA MINUTA	.5		1	.000		.0004					
	YOLDIA MYALIS	.5	1		.004	.0090						
	YOLDIA SCISSURATA	1.5	2	1	.130	.2480	.0120					
	AXINOPSIDA SERRICATA	91.5	62	121	1.011	.7310	1.2920	1		1	1	
	MYSELLA TUMIDA	.5		1	.000		.0010					
	MACOMA SP.	4.5	3	6	.239	.1180	.3610					
	MACOMA NASUTA	1.0	2		.101	.2020						
	SAXIDOMUS GIGANTEUS	2.0	1	3	.086	.0410	.1310					
	PSEPHIDIA LORDI	20.0	7	33	.171	.0530	.2900					
	MYODOCOPA	2.0		4	.001		.0020					
	EUDORELLA SP.	3.5	5	2	.002	.0030	.0020					
	HETEROPHOXUS OCULATUS	1.5	3		.000	.0010						
	PINNIXA OCCIDENTALIS	7.0	12	2	.034	.0650	.0030					
	AMPHIURIDAE	26.0	43	9	.552	.9650	.1400					
	MOLPADIA INTERMEDIA	.5	1		11.690	23.3800						
TOT:		663.5	512	815	19.987	35.4614	4.5134	46	33	40	26	14.6
L04	PACHYCERIANTHUS FIMBRIATA	1.0	1	1	.852	.7130	.9910					
	NEMERTEA	3.0	3	3	.279	.5260	.0320					
	HARMOTHOE LUNULATA	1.0	1	1	.002	.0020	.0030					
	PHOLOE MINUTA	.5		1	.001		.0020					
	ETEONE LONGA	.5	1		.000	.0004						
	GYPTIS BREVIPALPA	.5	1		.002	.0040						
	OPHIODROMUS PUGETTENSIS	1.0		2	.000		.0010					
	NEPHTYS LONGOSETOSA	.5	1		.000	.0004						
	HEMIPODUS BOREALIS	.5		1	.042		.0850					
	GLYCINDE PICTA	3.0	3	3	.223	.0920	.3550					
	LUMBRINERIS SP.	.5	1		.003	.0060						
	DORVILLEA SP.	2.5		5	.011		.0230					
	ARICIDEA LOPEZI	.5	1		.000	.0004						
	TAUBERIA GRACILIS	16.5	28	5	.003	.0050	.0010	1		1		
	SPIOPHANES BERKELEYORUM	.5		1	.003		.0070					
	PARAPRIONOSPIO PINNATA	1.0	1	1	.051	.0020	.1000					
	THARYX SP.	85.5	96	75	.250	.1950	.3060	1		1	1	
	PHERUSA PLUMOSA	.5	1		.037	.0740						
	STERNASPIS SCUTATA	1.0	2		.052	.1040						
	HETEROMASTUS FILOBRANCHUS	2.5	4	1	.005	.0080	.0020					
	PECTINARIA GRANULATA	.5	1		.028	.0570						
	TURBONILLA SP.	1.5	3		.005	.0110						
	CYLICHNA SP.	.5		1	.073		.1460					
	GASTROPTERON PACIFICUM	.5	1		.036	.0730						
	ACILA CASTRENSIS	.5		1	.125		.2510					

A: E05 AND E10 NOT PROCESSED.
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
	NUCULA TENUIS	.5	1		.000	.0010						
	AXINOPSIDA SERRICATA	32.5	34	31	.792	.9070	.6780	1		1	1	
	MYSELLA TUMIDA	1.0		2	.003		.0060					
	SAXIDOMUS GIGANTEUS	1.0		2	.681		1.3630					
	PSEPHIDIA LORDI	.5	1		.000	.0010						
	MYODOCOPA	1.5	3		.000	.0004						
	HETEROPHOXUS OCULATUS	1.0	2		.000	.0010						
	PINNIXA OCCIDENTALIS	1.0	2		.005	.0110						
	AMPHIURIDAE	6.0	1	11	.146	.0580	.2340					
TOT:		171.0	194	148	3.719	2.8526	4.5860	34	22	25	19	23.8
L05	PACHYCERIANTHUS FIMBRIATA	1.0		2	.625		1.2510					
	NEMERTEA	1.0	1	1	.001	.0004	.0010					
	GYPTIS BREVIPALPA	1.0		2	.000		.0004					
	NEREIS PROCERA	2.5	4	1	.101	.1600	.0430					
	NEPHTYS LONGOSETOSA	1.0		2	.000		.0010					
	HEMIPODUS BOREALIS	.5	1		.016	.0330						
	GLYCINDE PICTA	4.0	2	6	.250	.1230	.3770					
	TAUBERIA GRACILIS	1.5	1	2	.000	.0004	.0004					
	SPIOPHANES BERKELEYORUM	.5		1	.014		.0280					
	PARAPRIONOSPIO PINNATA	.5		1	.050		.1010					
	THARYX SP.	37.5	27	48	.171	.1450	.1980	1		1	1	
	HETEROMASTUS FILOBRANCHUS	4.0	1	7	.483	.2520	.7140					
	MITRELLA SP.	.5		1	.062		.1240					
	ODOSTOMIA SP.	1.0	2		.002	.0040						
	AXINOPSIDA SERRICATA	15.5	20	11	.276	.3320	.2210	1		1	1	
	MYSELLA TUMIDA	.5	1		.001	.0030						
	MACOMA SP.	.5	1		.018	.0360						
	MYODOCOPA	.5	1		.000	.0004						
TOT:		73.5	62	85	2.074	1.0892	3.0598	18	13	12	13	18.3
L06	NEMERTEA	.5	1		.004	.0090						
	NEREIS PROCERA	2.5	3	2	.024	.0320	.0160	1		1		
	NEPHTYS LONGOSETOSA	1.5		3	.000		.0010					
	NEPHTYS FERRUGINEA	.5		1	.002		.0050					
	GLYCINDE PICTA	3.5	1	6	.142	.0140	.2710	1			1	
	GONIADA BRUNNEA	.5	1		.141	.2820						
	LUMBRINERIS SP.	.5		1	.008		.0160					
	TAUBERIA GRACILIS	5.5	1	10	.002	.0004	.0030	1			1	
	PARAPRIONOSPIO PINNATA	1.0	1	1	.023	.0440	.0020					
	THARYX SP.	1.5		3	.004		.0080					

A: F05 AND F10 NOT PROCESSED.
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
	HETEROMASTUS FILOBRANCHUS	1.0		2	.037		.0750					
	MITRELLA SP.	.5		1	.010		.0210					
	CYLICHNA SP.	.5	1		.006	.0120						
	NUCULA TENUIS	1.0		2	.010		.0200					
	AXINOPSIDA SERRICATA	16.5	8	25	.153	.0510	.2560	1		1	1	
	MYSELLA TUMIDA	1.0		2	.000		.0010					
	MYODOCOPA	.5		1	.000		.0004					
TOT:		38.5	17	60	.570	.4444	.6954	17	11	8	14	21.9
L07	PACHYCERIANTHUS FIMBRIATA	1.0	1	1	7.612	8.1250	7.1000					
	NEMERTEA	1.5	1	2	2.186	3.3400	1.0320					
	PHOLOE MINUTA	.5		1	.000		.0010					
	ANAITIDES MUCOSA	.5	1		.221	.4420						
	NEREIS PROCERA	.5		1	.002		.0050					
	NEPHTYS LONGOSETOSA	.5		1	.000		.0004					
	NEPHTYS FERRUGINEA	.5	1		.010	.0200						
	GLYCERA CAPITATA	1.0	1	1	.160	.2910	.0290					
	GLYCINDE ARMIGERA	.5		1	.048		.0970					
	GONIADA BRUNNEA	2.5	2	3	.475	.4030	.5480					
	LUMBRINERIS SP.	1.5		3	.007		.0140					
	ARICIDEA LOPEZI	.5		1	.001		.0020					
	TAUBERIA GRACILIS	11.5	10	13	.002	.0020	.0020					
	LAONICE CIRRATA	.5		1	.003		.0060					
	PRIONOSPIO CIRRIFERA	1.5	3		.000	.0004						
	SPIOPHANES BERKELEYORUM	.5	1		.001	.0020						
	PARAPRIONOSPIO PINNATA	2.5	2	3	.111	.1320	.0910					
	CIRRATULUS CIRRATUS	.5	1		.001	.0020						
	THARYX SP.	18.0	10	26	.045	.0290	.0620					
	COSSURA SOYERI	1.0		2	.000		.0004					
	STERNASPIS SCUTATA	.5		1	.056		.1120					
	HETEROMASTUS FILOBRANCHUS	.5	1		.012	.0240						
	MEDIOMASTUS CALIFORNIENSI	.5		1	.000		.0004					
	AMPHICTEIS SCAPHOBRANCHIA	.5		1	.086		.1730					
	ACILA CASTRENSIS	2.0	2	2	.175	.0950	.2560					
	NUCULA TENUIS	8.0	2	14	.224	.0550	.3940					
	NUCULANA MINUTA	1.5	1	2	.097	.0310	.1440					
	YOLDIA SCISSURATA	4.0		8	.063		.1250					
	AXINOPSIDA SERRICATA	113.0	67	159	1.250	.9140	1.5860	1		1	1	
	MYSELLA TUMIDA	7.0	3	11	.015	.0050	.0260					
	MACOMA SP.	2.5	1	4	.002	.0010	.0040					
	SAXIDOMUS GIGANTEUS	1.5		3	.212		.4240					
	PSEPHIDIA LORDI	1.0	2		.009	.0180						

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN
VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1".
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10% OF THE TOTAL COUNT IN A REPLICATE.

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
	PANDORA FILOSA	1.5		3	.029		.0580					
	LYONSIA CALIFORNICA	.5	1		.039	.0790						
	PULSELLUM SALISHORUM	.5		1	.004		.0080					
	EUDORELLA SP.	25.5	13	38	.022	.0110	.0330	1			1	
	HETEROPHOXUS OCULATUS	6.0	5	7	.022	.0200	.0250					
	PINNIXA OCCIDENTALIS	1.0	2		.005	.0110						
	PRIAPULUS CAUDATUS	.5		1	.048		.0970					
	AMPHIURIDAE	6.5	5	12	.110	.0770	.1440					
	PENTAMERA POPULIFERA	11.0		22	.752		1.5050					
TOT:		244.5	139	350	14.117	14.1294	14.1042	42	29	25	33	27.4
L08	NEMERTEA	.5	1		.026	.0520						
	TENONIA KITSAPENSIS	.5	1		.000	.0010						
	GYPTIS BREVIPALPA	.5		1	.000		.0010					
	OPHIODROMUS PUGETTENSIS	.5	1		.000	.0004						
	NEPHTYS LONGOSETOSA	1.5	3		.004	.0080						
	HEMIPODUS BOREALIS	2.0	2	2	.204	.2170	.1920					
	GLYCINDE PICTA	1.5	1	2	.217	.1650	.2700					
	LUMBRINERIS SP.	.5	1		.004	.0080						
	ARICIDEA LOPEZI	.5	1		.000	.0004						
	TAUBERIA GRACILIS	6.0	6	6	.003	.0040	.0020					
	LAONICE CIRRATA	1.0	1	1	.600	.1820	1.0190					
	PRIONOSPIO STEENSTRUPI	.5	1		.000	.0004						
	PARAPRIONOSPIO PINNATA	2.0	2	2	.155	.2790	.0320					
	THARYX SP.	1.0	1	1	.001	.0020	.0010					
	STERNASPIS SCUTATA	1.0	2		.178	.3570						
	MYXICOLA AESTHETICA	.5	1		.149	.2990						
	MITRELLA SP.	1.5		3	.274		.5480					
	NUCULA TENUIS	4.0	3	5	.036	.0510	.0220					
	NUCULANA MINUTA	3.0		6	.172		.3440					
	YOLDIA SCISSURATA	1.0	1	1	.403	.5930	.2140					
	AXINOPSIDA SERRICATA	77.5	40	115	1.405	.8710	1.9390	1		1	1	
	MYSELLA TUMIDA	.5	1		.000	.0004						
	MACOMA SP.	2.0		4	.012		.0240					
	SAXIDOMUS GIGANTEUS	2.0	2	2	4.247	2.9270	5.5680					
	PSEPHIDIA LORDI	1.0		2	.003		.0060					
	NEOMYSIS INTEGER	.5	1		.017	.0340						
	EUDORELLA SP.	2.5	3	2	.001	.0010	.0010					
	HETEROPHOXUS OCULATUS	4.5	4	5	.012	.0160	.0090					
	AMPHIURIDAE	3.0	2	4	.075	.0310	.1190					
TOT:		123.0	82	164	8.205	6.0996	10.3110	29	21	24	18	29.2

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
L09	HARMOTHOE LUNULATA	.5	1		.005	.0110						
	PHOLOE MINUTA	.5	1		.001	.0020						
	GYPTIS BREVIPALPA	.5		1	.000		.0010					
	OPHIODROMUS PUGETTENSIS	1.0	2		.001	.0030						
	NEPHTYS LONGOSETOSA	.5		1	.000		.0010					
	HEMIPODUS BOREALIS	1.0	1	1	.163	.0160	.3100					
	GONIADA BRUNNEA	1.0		2	.141		.2830					
	DORVILLEA SP.	1.0	2		.006	.0130						
	TAUBERIA GRACILIS	3.0	3	3	.001	.0010	.0010					
	LAONICE CIRRATA	.5	1		.167	.3340						
	THARYX SP.	.5		1	.002		.0050					
	PISTA CRISTATA	1.0	2		.572	1.1440						
	CYLICHNA SP.	.5		1	.001		.0020					
	ACILA CASTRENSIS	.5		1	.001		.0030					
	NUCULA TENUIS	2.0		4	.018		.0360	1			1	
	NUCULANA MINUTA	.5		1	.036		.0720					
	AXINOPSIDA SERRICATA	11.5	13	10	.115	.1250	.1050	1		1	1	
	MYSELLA TUMIDA	5.5	7	4	.011	.0190	.0030	1		1	1	
	TRANSENNELLA TANTILLA	.5		1	.001		.0020					
	SAXIDOMUS GIGANTEUS	.5	1		.752	1.5040						
	PSEPHIDIA LORDI	1.5	1	2	.006	.0030	.0090					
	MYODOCOPA	1.0	1	1	.001	.0010	.0010					
	EUDORELLA SP.	.5	1		.000	.0004						
	HETEROPHOXUS OCULATUS	1.5	2	1	.001	.0010	.0010					
	PINNIXA OCCIDENTALIS	2.0	2	2	.026	.0220	.0300					
	AMPHIURIDAE	2.0	1	3	.067	.0030	.1320					
TOT:		41.0	42	40	2.100	3.2024	.5970	26	18	17	18	27.4
L10	PACHYCERIANTHUS FIMBRIATA	1.5	1	2	.703	.0280	1.3780					
	CEREBRATULUS SP.	1.0		2	3.821		7.6430					
	TENONIA KITSAPENSIS	.5		1	.001		.0020					
	PHOLOE MINUTA	.5		1	.001		.0020					
	ANAITIDES MACULATA	.5	1		.344	.6880						
	NEPHTYS LONGOSETOSA	.5		1	.003		.0060					
	HEMIPODUS BOREALIS	.5	1		.002	.0040						
	GLYCINDE PICTA	1.0	2		.015	.0300						
	LUMBRINERIS SP.	5.0	7	3	.044	.0690	.0190					
	ARICIDEA LOPEZI	3.0	2	4	.006	.0020	.0100					
	TAUBERIA GRACILIS	28.0	29	27	.024	.0290	.0200	1			1	
	LAONICE CIRRATA	.5		1	.220		.4400					
	PRIONOSPIO CIRRIFERA	.5		1	.000		.0004					

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10% OF THE TOTAL COUNT IN A REPLICATE.

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
	SPIOPHANES BERKELEYORUM	1.0		2	.022		.0450					
	PARAPRIONOSPIO PINNATA	4.0	2	6	.189	.0300	.3480					
	THARYX SP.	.5		1	.001		.0020					
	CHAETOZONE SETOSA	1.0	2		.004	.0090						
	ARMANDIA BREVIS	.5	1		.000	.0004						
	STERNASPIS SCUTATA	2.5	2	3	.437	.3130	.5620					
	HETEROMASTUS FILIFORMIS	1.0		2	.008		.0170					
	PRAXILLELLA AFFINIS	.5	1		.002	.0040						
	PECTINARIA GRANULATA	1.5	3		.001	.0020						
	TEREBELLIDES STROEMI	.5	1		.003	.0070						
	ALVINIA SP.	1.5	3		.003	.0060						
	EPITONIUM TINCTUM	.5		1	.005		.0110					
	ODOSTOMIA SP.	2.0	4		.002	.0050						
	TURBONILLA SP.	.5	1		.028	.0560						
	CYLICHNA SP.	.5	1		.000	.0004						
	ACILA CASTRENSIS	23.5	23	24	2.834	1.5480	4.1210	1			1	
	NUCULA TENUIS	12.0	18	6	.467	.5360	.3990					
	NUCULANA MINUTA	6.0	8	4	.344	.5180	.1700					
	YOLDIA SCISSURATA	4.0	4	4	.093	.0600	.1270					
	AXINOPSIDA SERRICATA	69.5	119	20	.820	1.4230	.2170	1		1		
	MYSELLA TUMIDA	3.5	7		.004	.0080						
	MACOMA SP.	7.0	12	2	.047	.0630	.0320					
	SAXIDOMUS GIGANTEUS	.5	1		.008	.0160						
	PSEPHIDIA LORDI	4.0	5	3	.030	.0190	.0410					
	PANDORA FILOSA	.5		1	.035		.0700					
	PULSELLUM SALISHORUM	6.0	12		.034	.0690						
	MYODOCOPA	6.0	12		.003	.0070						
	EUDORELLA SP.	27.5	35	20	.025	.0380	.0130					
	HETEROPHOXUS OCULATUS	13.5	5	22	.026	.0030	.0500					
	BRACHYURA (JUVENILES)	1.0	2		.000	.0010						
	AMPHIURIDAE	13.0	19	7	.250	.2690	.2320					
	PENTAMERA POPULIFERA	362.0	659	65	15.019	11.3300	18.7090	1		1	1	
TOT:		620.5	1005	236	25.939	17.1908	34.6864	45	31	34	28	27.4
L11	PACHYCERIANTHUS FIMBRIATA	1.5	1	2	2.584	.6820	4.4860					
	NEMERTEA	.5	1		.003	.0070						
	EUNCE UNISERIATA	.5		1	.011		.0220					
	GYPTIS BREVIPALPA	.5	1		.000	.0010						
	NEREIS PROCERA	.5	1		.040	.0800						
	NEPHTYS LONGOSETOSA	1.0	2		.003	.0070						
	HEMIPODUS BOREALIS	.5	1		.138	.2770						
	GLYCINDE PICTA	2.0	1	3	.036	.0190	.0530					

A: E05 AND E10 NOT PROCESSED.
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MEAN: MEAN # OF TAXA IN 2 REPLICATES.
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5(21)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
	LUMBRINERIS SP.	1.0		2	.031		.0630					
	DORVILLEA ANNULATA	.5		1	.014		.0280					
	ARICIDEA LOPEZI	6.0	6	6	.004	.0030	.0050					
	TAUBERIA GRACILIS	30.5	28	33	.017	.0150	.0190	1			1	
	PRIONOSPIO CIRRIFERA	1.0	1	1	.000	.0004	.0004					
	SPIOPHANES SP.	1.0	2		.001	.0030						
	PARAPRIONOSPIO PINNATA	4.0	5	3	.107	.0120	.2030					
	CIRRATULUS CIRRATUS	.5	1		.002	.0050						
	THARYX SP.	.5		1	.001		.0030					
	COSSURA SOYERI	.5		1	.000		.0004					
	STERNASPIS SCUTATA	9.0	12	6	1.718	2.0180	1.4180					
	HETEROMASTUS FILOBRANCHUS	1.0		2	.002		.0040					
	MEDIOMASTUS CALIFORNIENSI	.5	1		.001	.0030						
	PRAXILLELLA AFFINIS	3.0	6		.031	.0620						
	EUCLYMENINAE	.5		1	.003		.0070					
	AMPHICTEIS SCAPHOBRANCHIA	.5	1		.038	.0770						
	MELINNA ELISABETHAE	.5		1	.000		.0010					
	ALVINIA SP.	.5	1		.000	.0010						
	EPITONIUM TINCTUM	.5		1	.032		.0640					
	ODOSTOMIA SP.	.5	1		.003	.0060						
	CYLICHNA SP.	.5	1		.012	.0250						
	ACILA CASTRENSIS	47.0	82	12	7.812	14.2160	1.4090	1		1		
	NUCULA TENUIS	17.0	20	14	.393	.3300	.4560					
	NUCULANA MINUTA	7.5	10	5	.270	.5200	.0210					
	YOLDIA SCISSURATA	1.5	2	1	.856	.1130	1.6000					
	YOLDIA THRACIAEFORMIS	.5	1		.694	1.3890						
	MUSCULUS LAEVIGATUS	.5	1		.041	.0830						
	AXINOPSIDA SERRICATA	17.5	31	4	.097	.1790	.0150	1		1		
	MYSELLA TUMIDA	.5	1		.001	.0020						
	MACOMA SP.	5.0	2	8	.008	.0010	.0160					
	TELLINA CARPENTERI	.5		1	.006		.0120					
	SAXIDOMUS GIGANTEUS	1.5	2	1	.090	.1390	.0410					
	PSEPHIDIA LORDI	6.5	10	3	.116	.1520	.0800					
	PANDORA FILOSA	.5		1	.026		.0520					
	CARDIOMYA OLDROYDI	.5		1	.000		.0010					
	PULSELLUM SALISHORUM	6.0	11	1	.038	.0730	.0040					
	MYODOCOPA	4.5	2	7	.001	.0004	.0020					
	EUDORELLA SP.	13.5	16	11	.011	.0160	.0060					
	PROTOMEDEIA SP.	1.5	3		.001	.0030						
	HETEROPHOXUS OCULATUS	9.5	8	11	.013	.0100	.0160					
	PINNIXA OCCIDENTALIS	.5		1	.001		.0030					
	AMPHIURIDAE	22.5	22	23	.457	.5340	.3810	1			1	

A: E05 AND E10 NOT PROCESSED.
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5(22)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	DPTH (M)
TOT:		234.0	298	170	15.778	21.0638	10.4918	50	35	37	33	25.6
L12	PACHYCERIANTHUS FIMBRIATA	.5	1		1.701	3.4030						
	NEMERTEA	1.0	1	1	.180	.3600	.0004					
	CEREBRATULUS SP.	.5		1	.293		.5870					
	EUNOE UNISERIATA	.5	1		.022	.0450						
	PHOLOE MINUTA	.5		1	.001		.0030					
	NEPHTYS LONGOSETOSA	1.0	2		.134	.2680						
	NEPHTYS FERRUGINEA	.5	1		.006	.0120						
	GLYCINDE PICTA	.5		1	.012		.0250					
	GONIADA BRUNNEA	.5	1		.513	1.0270						
	LUMBRINERIS SP.	1.0	2		1.033	2.0660						
	DORVILLEA ANNULATA	.5		1	.003		.0070					
	ARICIDEA LOPEZI	.5		1	.000		.0004					
	TAUBERIA GRACILIS	15.0	13	17	.004	.0040	.0050					
	PRIONOSPIO CIRRIFERA	1.0	1	1	.000	.0004	.0004					
	SPIOPHANES BERKELEYORUM	.5		1	.002		.0040					
	PARAPRIONOSPIO PINNATA	2.5	4	1	.147	.2280	.0670					
	ARMANDIA BREVIS	.5		1	.001		.0020					
	TRAVISIA PUPA	3.0	1	5	4.306	2.0920	6.5210					
	STERNASPIS SCUTATA	1.0		2	.112		.2240					
	HETEROMASTUS FILOBRANCHUS	.5	1		.056	.1130						
	ODOSTOMIA SP.	.5		1	.000		.0010					
	CYLICHNA SP.	2.0	1	3	.099	.0200	.1790					
	ACILA CASTRENSIS	3.0	4	2	.106	.2030	.0090					
	NUCULA TENUIS	6.5	7	6	.097	.1730	.0210					
	NUCULANA MINUTA	1.0	1	1	.017	.0220	.0130					
	YOLDIA SCISSURATA	.5	1		.078	.1560						
	AXINOPSIDA SERRICATA	42.5	26	59	.473	.2930	.6530	1		1	1	
	MYSELLA TUMIDA	1.0	2		.001	.0030						
	SAXIDOMUS GIGANTEUS	1.5		3	.075		.1500					
	PULSELLUM SALISHORUM	.5	1		.002	.0040						
	MYODOCOPA	25.0	17	33	.017	.0140	.0200	1		1	1	
	EUDORELLA SP.	16.5	7	26	.011	.0050	.0170	1			1	
	HETEROPHOXUS OCULATUS	7.5	7	8	.012	.0120	.0130					
	PINNIXA OCCIDENTALIS	1.5		3	.005		.0100					
	AMPHIURIDAE	64.5	54	75	.968	.7090	1.2270	1		1	1	
	MOLPADIA INTERMEDIA	.5	1		8.156	16.3130						
TOT:		206.0	158	254	18.652	27.5454	9.7592	36	25	25	25	23.8

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APPENDIX 4

Dominant taxa of infaunal macrobenthos at 20 stations in Bellingham Bay and two stations in Samish Bay sampled by 0.1 m^2 Van Veen grab in May and October, 1983.

Appendix 4
(2 of 4)

DOMINANT INVERTEBRATE TAXA IN BELLINGHAM BAY BENTHOS
MEAN COUNT AND WET WEIGHT PER 0.1M2 BY STATION (SEE A,D)

STA-TION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP2 NSP	REP2 NSP	DPTH (M)
E01	OWENIA FUSIFORMIS	1038.0	895	1181	7.271	6.6330	7.9090	1		1	1	5.7
DOM: TOT:		1038.0 2016.5	895	1181	7.271 15.104	6.6330	7.9090	1 59	50	1 46	1 54	5.7 5.7
E02	THARYX SP. PROTOMEDEIA SP.	657.0 221.5	899 235	415 208	3.871 .693	4.4580 .7380	3.2850 .6480	1 1		1 1	1 1	7.9 7.9
DOM: TOT:		878.5 1241.0	1134	623	4.565 9.250	5.1960	3.9330	2 45	36	2 36	2 35	7.9 7.9
E03	DORVILLEA ANNULATA THARYX SP.	508.5 1036.0	541 976	476 1096	1.021 1.805	1.1150 1.9390	.9270 1.6720	1 1		1 1	1 1	4.5 4.5
DOM: TOT:		1544.5 1831.5	1517	1572	2.826 22.588	3.0540	2.5990	2 40	33	2 33	2 33	4.5 4.5
E04	THARYX SP.	408.0	501	315	1.743	1.9130	1.5740	1		1	1	11.5
DOM: TOT:		408.0 468.0	501	315	1.743 8.680	1.9130	1.5740	1 20	15	1 16	1 14	11.5 11.5
E06	THARYX SP.	1466.0	1270	1662	3.281	2.8390	3.7240	1		1	1	12.3
DOM: TOT:		1466.0 1951.0	1270	1662	3.281 8.717	2.8390	3.7240	1 54	43	1 41	1 44	12.3 12.3
E07	THARYX SP.	153.5	233	74	.961	1.6030	.3200	1		1	1	11.3
DOM: TOT:		153.5 162.5	233	74	.961 1.569	1.6030	.3200	1 10	7	1 7	1 6	11.3 11.3
E08	THARYX SP.	1595.0	1920	1270	2.400	2.4620	2.3380	1		1	1	13.6
DOM: TOT:		1595.0 1972.0	1920	1270	2.400 8.229	2.4620	2.3380	1 56	43	1 45	1 40	13.6 13.6
E09	GLYCINDE PICTA AXINOPSIDA SERRICATA PSEPHIDIA LORDI EUDORELLA SP.	25.0 52.5 30.0 59.0	25 25 17 47	25 80 43 71	.563 .376 .242 .038	.6770 .2470 .1780 .0310	.4490 .5050 .3070 .0460	1 1 1 1		1 1 1	 1 1 1	13.6 13.6 13.6 13.6
DOM: TOT:		166.5 271.5	114	219	1.220 3.916	1.1330	1.3070	4 47	36	3 31	3 40	13.6 13.6
E11	MYODOCOPA	59.0	68	50	.021	.0210	.0220	1		1		14.8

A: E05 AND E10 NOT PROCESSED.
B: A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT IN A REPLICATE.
C: 0.0004G USED AS VALUE FOR WEIGHT > 1 MG.
D: STATION TOTALS REPORTED FOR COMPARISON.

S(2)

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              DOMINANT INVERTEBRATE TAXA IN BELLINGHAM BAY BENTHOS
           MEAN COUNT AND WET WEIGHT PER 0.1M2 BY STATION (SEE A,D)
STA- TAXON
TION
                                 MEAN REP 1 REP 2    MEAN    REP 1    REP 2 TOTAL MEAN REP2 REP2 DPTH
                                COUNT COUNT COUNT  WEIGHT   WEIGHT   WEIGHT   NSP  NSP  NSP  NSP  (M)
                              #/0.1M2             G/0.1M2  (SEE B)          SEE C
      EUDORELLA SP.
      BRACHYURA (JUVENILES)
      AMPHIURIDAE
                                 65.5   121    10    .034    .0600    .0080     1         1      14.8
                                139.0    84   194    .119    .0690    .1700     1         1    1 14.8
                                 53.0    48    58   4.859   5.2240   4.4940     1         1    1 14.8
DOM:                            316.5   221   312   5.034   5.3740   4.6940     4         4    2 14.8
TOT:                            500.5              16.122                      66   42   33   53 14.8
F12   PSEPHIDIA LORDI
      EUDORELLA SP.
      BRACHYURA (JUVENILES)
      AMPHIURIDAE
                                 28.0    33    23    .026    .0100    .0430     1         1    1 16.1
                                 27.0    37    17    .016    .0210    .0110     1         1    1 16.1
                                 59.5    81    38    .047    .0710    .0230     1         1    1 16.1
                                 21.5    22    21   2.146   1.6080   2.6850     1              1 16.1
DOM:                            136.0   173    99   2.236   1.7100   2.7620     4         3    4 16.1
TOT:                            233.0               4.054                      38   28   33   22 16.1
L01   THARYX SP.
      OWENIA FUSIFORMIS
                                809.5   836   783   1.545   1.4020   1.6890     1         1       7.6
                               7705.5  2826 12585   8.309   5.6560  10.9630     1         1    1  7.6
DOM:                           8515.0  3662 13368   9.855   7.0580  12.6520     2         2    1  7.6
TOT:                           8715.0              12.539                      53   41   43   38  7.6
L02   THARYX SP.
      OWENIA FUSIFORMIS
                                379.0   310   448   1.601   1.3030   1.9000     1         1    1 10.7
                                463.0   324   602    .191    .1000    .2820     1         1    1 10.7
DOM:                            842.0   634  1050   1.792   1.4030   2.1820     2         2    2 10.7
TOT:                           1090.5              34.919                      47   33   32   34 10.7
L03   THARYX SP.
      AXINOPSIDA SERRICATA
                                448.0   295   601   1.561   1.1350   1.9870     1         1    1 14.6
                                 91.5    62   121   1.011    .7310   1.2920     1         1    1 14.6
DOM:                            535.5   357   722   2.572   1.8660   3.2790     2         2    2 14.6
TOT:                            663.5              19.987                      46   33   40   26 14.6
L04   TAUBERIA GRACILIS
      THARYX SP.
      AXINOPSIDA SERRICATA
                                 16.5    28     5    .003    .0050    .0010     1         1      23.8
                                 85.5    96    75    .250    .1950    .3060     1         1    1 23.8
                                 32.5    34    31    .792    .9070    .6780     1         1    1 23.8
DOM:                            134.5   158   111   1.046   1.1070    .9850     3         3    2 23.8
TOT:                            171.0               3.719                      34   22   25   19 23.8
L05   THARYX SP.
      AXINOPSIDA SERRICATA
                                 37.5    27    48    .171    .1450    .1980     1         1    1 18.3
                                 15.5    20    11    .276    .3320    .2210     1         1    1 18.3
DOM:                             53.0    47    59    .448    .4770    .4190     2         2    2 18.3
TOT:                             73.5               2.074                      18   13   12   13 18.3

                                       A: E05 AND E10 NOT PROCESSED.
                                       B: A DOMINANT TAXON IS ONE COMPRISING AT LEAST
                                          10% OF THE TOTAL COUNT IN A REPLICATE.
                                       C: 0.0004G USED AS VALUE FOR WEIGHT > 1 MG.
                                       D: STATION TOTALS REPORTED FOR COMPARISON.
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o(3)

DOMINANT INVERTEBRATE TAXA IN BELLINGHAM BAY BENTHOS
MEAN COUNT AND WET WEIGHT PER 0.1M2 BY STATION (SEE A,D)

STATION	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP2 NSP	REP2 NSP	DPTH (M)
L06	NEREIS PROCERA	2.5	3	2	.024	.0320	.0160	1		1		21.9
	GLYCINDE PICTA	3.5	1	6	.142	.0140	.2710	1			1	21.9
	TAUBERIA GRACILIS	5.5	1	10	.002	.0004	.0030	1			1	21.9
	AXINOPSIDA SERRICATA	16.5	8	25	.153	.0510	.2560	1		1	1	21.9
DOM:		28.0	13	43	.322	.0974	.5460	4		2	3	21.9
TOT:		38.5			.570			17	11	8	14	21.9
L07	AXINOPSIDA SERRICATA	113.0	67	159	1.250	.9140	1.5860	1		1	1	27.4
	EUDORELLA SP.	25.5	13	38	.022	.0110	.0330	1			1	27.4
DOM:		138.5	80	197	1.272	.9250	1.6190	2		1	2	27.4
TOT:		244.5			14.117			42	29	25	33	27.4
L08	AXINOPSIDA SERRICATA	77.5	40	115	1.405	.8710	1.9390	1		1	1	29.2
DOM:		77.5	40	115	1.405	.8710	1.9390	1		1	1	29.2
TOT:		123.0			8.205			29	21	24	18	29.2
L09	NUCULA TENUIS	2.0		4	.019		.0360	1			1	27.4
	AXINOPSIDA SERRICATA	11.5	13	10	.115	.1250	.1050	1		1	1	27.4
	MYSELLA TUMIDA	5.5	7	4	.011	.0190	.0030	1		1	1	27.4
DOM:		19.0	20	18	.144	.1440	.1440	3		2	3	27.4
TOT:		41.0			2.100			26	18	17	18	27.4
L10	TAUBERIA GRACILIS	28.0	29	27	.024	.0290	.0200	1			1	27.4
	ACILA CASTRENSIS	23.5	23	24	2.834	1.5480	4.1210	1			1	27.4
	AXINOPSIDA SERRICATA	69.5	119	20	.820	1.4230	.2170	1		1		27.4
	PENTAMERA POPULIFERA	362.0	659	65	15.019	11.3300	18.7090	1		1	1	27.4
DOM:		483.0	830	136	18.698	14.3300	23.0670	4		2	3	27.4
TOT:		620.5			25.939			45	31	34	28	27.4
L11	TAUBERIA GRACILIS	30.5	28	33	.017	.0150	.0190	1			1	25.6
	ACILA CASTRENSIS	47.0	82	12	7.812	14.2160	1.4090	1		1		25.6
	AXINOPSIDA SERRICATA	17.5	31	4	.097	.1790	.0150	1		1		25.6
	AMPHIURIDAE	22.5	22	23	.457	.5340	.3810	1			1	25.6
DOM:		117.5	163	72	8.384	14.9440	1.8240	4		2	2	25.6
TOT:		234.0			15.778			50	35	37	33	25.6
L12	AXINOPSIDA SERRICATA	42.5	26	59	.473	.2930	.6530	1		1	1	23.8
	MYODOCOPA	25.0	17	33	.017	.0140	.0200	1		1	1	23.8
	EUDORELLA SP.	16.5	7	26	.011	.0050	.0170	1			1	23.8

A: E05 AND E10 NOT PROCESSED.
B: A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT IN A REPLICATE.
C: 0.0004G USED AS VALUE FOR WEIGHT > 1 MG.
C: STATION TOTALS REPORTED FOR COMPARISON.

(-(4)

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                                DOMINANT INVERTEBRATE TAXA IN BELLINGHAM BAY BENTHOS
                              MEAN COUNT AND WET WEIGHT PER 0.1M2 BY STATION (SEE A,D)

STA- TAXON
TION                         MEAN REP 1 REP 2     MEAN    REP 1     REP 2 TOTAL MEAN REP2 REP2 DPTH
                            COUNT COUNT COUNT   WEIGHT   WEIGHT    WEIGHT   NSP  NSP  NSP  NSP  (M)
                          #/0.1M2             G/0.1M2 (SEE B)              SEE C

     AMPHIURIDAE             64.5    54    75     .968    .7090    1.2270     1            1    1 23.8

DOM:                        146.5   104   193    1.469   1.0210    1.9170     4            3    4 23.8
TOT:                        206.0                18.652                      36   25     25   25 23.8
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A: E05 AND E10 NOT PROCESSED.
B: A DOMINANT TAXON IS ONE COMPRISING AT LEAST
   10% OF THE TOTAL COUNT IN A REPLICATE.
C: 0.00040 USED AS VALUE FOR WEIGHT > 1 MG.
D: STATION TOTALS REPORTED FOR COMPARISON.
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APPENDIX 5

Infaunal macrobenthos at 20 stations in Bellingham Bay and two stations in Samish Bay sampled by 0.1 m^2 Van Veen grab in May and October, 1983.

FIGURE B-[illegible]
(1 OF 37)

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                     BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                          COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TAXONOMIC GROUP   TAXON                          MEAN  REP 1  REP 2    MEAN    REP 1    REP 2  TOTAL MEAN REP1 REP2 W1 W2 DPTH
TION                                                 COUNT  COUNT  COUNT  WEIGHT   WEIGHT   WEIGHT   NSP  NSP  NSP  NSP        (M)
                                                   #/0.1M2                G/0.1M2  (SEE B)          SEE C
E01  CNIDARIA          HALCAMPA DECEMTENTACULATA       1.5      1      2    .231    .0640    .3990
     SUM                                               1.5      1      2    .231    .0640    .3990
     NEMERTEA          NEMERTEA                        4.0      4      4    .064    .0570    .0710                             5.7
     SUM                                               4.0      4      4    .064    .0570    .0710
     POLYCHAETA                                                                                                               5.7
                       HARMOTHOE IMBRICATA             1.0             2    .002             .0040
                       TENONIA KITSAPENSIS              .5             1    .003             .0070
                       PHOLOE MINUTA                   3.0      4      2    .015    .0270    .0040
                       ETEONE LONGA                    3.5      3      4    .019    .0140    .0220
                       EULALIA SP.                      .5             1    .007             .0140
                       OPHIODROMUS PUGETTENSIS         2.0      2      2    .043    .0560    .0310
                       NEREIS SP.                       .5             1    .003             .0060
                       NEPHTYS LONGOSETOSA             1.5      1      2    .001    .0004    .0010
                       GLYCINDE PICTA                 19.0     15     23    .216    .1490    .2840
                       LUMBRINERIS SP.                21.0     18     24    .394    .2950    .4940
                       DORVILLEA SP.                   5.5      4      7    .029    .0220    .0370
                       LAONICE CIRRATA                 3.0      3      3    .204    .2940    .1150
                       POLYDORA CARDALIA               1.5      1      2    .018    .0050    .0310
                       PRIONOSPIO STEENSTRUPI          2.5      1      4    .002    .0010    .0030
                       SPIOPHANES BERKELEYORUM          .5      1           .001    .0020
                       PARAPRIONOSPIO PINNATA          2.5      1      4    .209    .0820    .3370
                       TROCHOCHAETA MULTISETOSA         .5             1    .024             .0480
                       CIRRATULUS CIRRATUS            40.5     25     56    .264    .0950    .4330
                       THARYX SP.                     98.0    101     95    .314    .5320    .0960
                       CAPITELLA SP.                   1.0             2    .000             .0010
                       HETEROMASTUS FILIFORMIS          .5      1           .001    .0020
                       HETEROMASTUS FILOBRANCHUS        .5      1           .002    .0050
                       MEDIOMASTUS CALIFORNIENSI      14.5     10     19    .078    .0690    .0880
                       MALDANE GLEBIFLEX               1.0      2           .005    .0110
                       PRAXILLELLA GRACILIS            3.0      2      4    .118    .0200    .2160
                       EUCLYMENINAE                    3.5      1      6    .011    .0010    .0220
                       OWENIA FUSIFORMIS            1038.0    995   1181   7.271   6.6330   7.9090   1         1    1   1  1
                       PECTINARIA GRANULATA            1.0      1      1    .008    .0020    .0140
                       AMPHARETE LABROPS               6.0      7      5    .128    .0600    .1960
                       AMPHARETE FINMARCHICA           1.0             2    .001             .0030
                       MELINNA ELISABETHAE             2.5             5    .101             .2020
                       PISTA CRISTATA                  1.5             3    .120             .2400
                       TEREBELLIDES STROEMI           46.5     53     40   3.123   3.6700   2.5760   1                   1  1

                                          A: E05 AND E10 NOT PROCESSED.
                                          B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THI
                                             TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                          C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                             MEAN: MEAN # OF TAXA IN 2 REPLICATES.
                                             DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN.
                                             DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUN
                                             OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UND
                                             "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
                     BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                             COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TAXONOMIC GROUP  TAXA
TION                                           MEAN REP 1 REP 2    MEAN    REP 1     REP 2 TOTAL MEAN REP1 REP2 W1 W2 DPTH
                                              COUNT COUNT COUNT  WEIGHT   WEIGHT    WEIGHT   NSP  NSP  NSP  NSP        (M)
                                             #/0.1M2            G/0.1M2  (SEE B)           SEE C
     SUM
                                             1327.5  1149  1506  12.741  12.0474  13.4340
     GASTROPODA       NASSARIUS MENDICUS        1.0     1     1    .350    .3390     .3610                                5.7
                      AGLAJA DIOMEDEA            .5           1    .004              .0090
     SUM
                                                1.5     1     2    .355    .3390     .3700
     BIVALVIA         PSEPHIDIA LORDI            .5           1    .010              .0200                                5.7
     SUM
                                                 .5           1    .010              .0200
     OSTRACODA        MYODOCOPA               118.5   114   123    .130    .1180     .1430                                5.7
     SUM
                                              118.5   114   123    .130    .1180     .1430
     CUMACEA          EUDORELLA SP.             6.0     2    10    .002    .0030     .0010                                5.7
                      DIASTYLIS SP.            26.0    28    24    .091    .1010     .0810
     SUM
                                               32.0    30    34    .093    .1040     .0820
     ISOPODA          SYNIDOTEA BICUSPIDA       1.5     1     2    .013    .0160     .0110                                5.7
                      MUNNOGONIUM WALDRONENSE   3.0           6    .001              .0020
     SUM
                                                4.5     1     8    .014    .0160     .0130
     AMPHIPODA        AMPELISCA AGASSIZI         .5     1          .009    .0190                                        5.7
                      AMPELISCA PUGETICA       26.0    23    29    .052    .0540     .0500
                      COROPHIUM SP.            24.5    14    35    .030    .0200     .0410
                      PHOTIS SP.              118.0    97   139    .202    .1710     .2340
                      PROTOMEDEIA SP.         139.5   174   105    .395    .5420     .2480
                      ORCHOMENE SP.            13.5    16    11    .024    .0300     .0180
                      WESTWOODILLA CAECULA      3.0     3     3    .007    .0030     .0110
                      HETEROPHOXUS OCULATUS    34.5    41    28    .088    .0620     .1140
                      FOXIPHALUS COGNATUS      12.5    11    14    .012    .0140     .0110
                      DULICHIA SP.              2.5           5    .002              .0040
                      TRITELLA PILIMANA         3.5     2     5    .001    .0010     .0020
     SUM
                                              378.0   382   374    .824    .9160     .7330
     DECAPODA         BRACHYURA (JUVENILES)    23.0    21    25    .014    .0160     .0120                                5.7
                      PINNIXA OCCIDENTALIS     17.5    15    20    .125    .1140     .1370

                                      A: EC5 AND EIC NOT PROCESSED.
                                      B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                                         TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                      C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                         MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
                                         DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
                                         DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                         OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER
                                         "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	SUM		40.5	36	45	.139	.1300	.1490							
	OTHER ARTHROPODA	LEPTOCHELIA DUBIA	102.5	59	106	.053	.0120	.0950							5.7
	SUM		102.5	59	106	.053	.0120	.0950							
	PRIAPULIDA	PRIAPULUS CAUDATUS	1.5	2	1	.418	.2150	.6210							5.7
	SUM		1.5	2	1	.418	.2150	.6210							
	OPHIUROIDEA	AMPHIURIDAE	4.0	2	6	.029	.0020	.0570							5.7
	SUM		4.0	2	6	.029	.0020	.0570							
TOT:			1108.5	1821	2212	15.104	14.0204	16.1870	59	50	46	54			5.7
E02	CNIDARIA	HALCAMPA DECEMTENTACULATA	.5		1	.310		.6210							5.7
	SUM		.5		1	.310		.6210							
	NEMERTEA	NEMERTEA	4.0	5	3	.050	.0330	.0670							7.9
	SUM		4.0	5	3	.050	.0330	.0670							
	POLYCHAETA	POLYEUNOA TUTA	.5		1	.003		.0060							7.9
		ETEONE LONGA	3.5	5	2	.005	.0090	.0010							
		OPHIODROMUS PUGETTENSIS	5.5	7	4	.055	.0710	.0390							
		NEPHTYS LONGOSETOSA	27.5	34	21	.033	.0380	.0280							
		GLYCINDE PICTA	46.5	53	40	.934	1.0700	.7980	1				1		
		LUMBRINERIS SP.	.5	1		.009	.0190								
		DORVILLEA SP.	6.5	8	5	.017	.0230	.0110							
		ARICIDEA SP.	.5	1		.000	.0004								
		PRIONOSPIO CIRRIFERA	1.0		2	.000		.0004							
		PARAPRIONOSPIO PINNATA	3.0	3	3	.101	.0550	.1480							
		CIRRATULUS CIRRATUS	8.5	10	7	.014	.0150	.0140							
		THARYX SP.	657.0	899	415	3.871	4.4580	3.2850	1		1	1	1	1	
		ARMANDIA BREVIS	21.5	20	23	.101	.1170	.0850							
		HETEROMASTUS FILOBRANCHUS	3.5	7		.155	.3100								
		MEDIOMASTUS CALIFORNIENSI	1.0		2	.161		.3230							
		OWENIA FUSIFORMIS	.5	1		.003	.0060								
		AMPHARETE LABROPS	3.5	5	2	.015	.0280	.0030							
		AMPHARETE FINMARCHICA	.5		1	.001		.0020							

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STATION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	SUM		791.0	1054	528	5.481	6.2154	4.7434							
	GASTROPODA	ALVINIA SP.	5.0		10	.002		.0050							7.9
	SUM		5.0		10	.002		.0050							
	BIVALVIA	AXINOPSIDA SERRICATA	6.0	6	6	.048	.0360	.0600							7.9
		MYSELLA TUMIDA	61.0	37	85	.070	.0310	.1100							
		CLINOCARDIUM SP.	.5		1	.009		.0180							
		MACOMA SP.	12.0	12	12	1.036	1.1440	.9290	1				1	1	
		MACOMA NASUTA	2.5	3	2	1.306	1.9810	.6320	1				1		
		TELLINA CARPENTERI	1.5	2	1	.012	.0010	.0230							
	SUM		83.5	60	107	2.482	3.1930	1.7720							
	OSTRACODA	MYODOCOPA	4.5	3	6	.006	.0020	.0110							7.9
	SUM		4.5	3	6	.006	.0020	.0110							
	CUMACEA	LAMPROPIDAE	.5		1	.000		.0010							7.9
		EUDORELLA SP.	46.5	46	47	.019	.0230	.0160							
		DIASTYLIS SP.	42.0	48	36	.162	.2060	.1190							
	SUM		89.0	94	84	.182	.2290	.1360							
	AMPHIPODA	AMPELISCA SP.	.5	1		.000	.0010								7.9
		COROPHIUM SP.	12.5	17	8	.012	.0140	.0100							
		PROTOMEDEIA SP.	221.5	235	208	.693	.7380	.6480	1		1	1			
		ORCHOMENE SP.	4.5	5	4	.004	.0030	.0050							
		WESTWOODILLA CAECULA	3.0	3	3	.003	.0040	.0030							
		HETEROPHOXUS OCULATUS	1.5	1	2	.003	.0050	.0020							
		FOXIPHALUS COGNATUS	1.0	2		.001	.0020								
		DULICHIA SP.	.5	1		.000	.0010								
	SUM		245.0	265	225	.718	.7680	.6680							
	DECAPODA	UPOGEBIA PUGETTENSIS	.5	1		.000	.0010								7.9
		BRACHYURA (JUVENILES)	12.5	15	10	.011	.0140	.0080							
		PINNIXA OCCIDENTALIS	.5		1	.001		.0030							
	SUM		13.5	16	11	.013	.0150	.0110							
															7.9

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXA	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	OTHER ARTHROPODA	LEPTOCHELIA DUBIA	1.0	2		.000	.0004								
	SUM		1.0	2		.000	.0004								
	PRIAPULICA	PRIAPULUS CAUDATUS	.5	1		.001	.0030								7.9
	SUM		.5	1		.001	.0030								
	OPHIUROIDEA	AMPHIURIDAE	3.5	4	3	.001	.0010	.0020							7.9
	SUM		3.5	4	3	.001	.0010	.0020							
TOT:			492.5	1504	578	9.250	10.4639	8.0364	45	36	36	35			7.9
EO3	NEMERTEA	NEMERTEA	1.0	1	1	.010	.0180	.0020							7.9
	SUM		1.0	1	1	.010	.0180	.0020							
	POLYCHAETA	PHOLOE MINUTA	1.5	1	2	.004	.0030	.0050							4.5
		ETEONE PACIFICA	1.0		2	.002		.0050							
		ETEONE LONGA	14.5	13	16	.031	.0240	.0380							
		GYPTIS BREVIPALPA	.5	1		.000	.0004								
		OPHIODROMUS PUGETTENSIS	31.5	46	17	.189	.3060	.0710							
		NEREIS SP.	.5	1		.000	.0004								
		NEPHTYS LONGOSETOSA	8.0	13	3	.021	.0400	.0020							
		GLYCINDE PICTA	43.0	54	32	.735	1.0090	.4610							
		LUMBRINERIS SP.	4.0	7	1	.012	.0220	.0010							
		DORVILLEA ANNULATA	508.5	541	476	1.021	1.1150	.9270	1		1	1			
		POLYDORA SOCIALIS	3.0	5	1	.004	.0070	.0010							
		PRIONOSPIO CIRRIFERA	5.0		10	.005		.0100							
		THARYX SP.	1036.0	976	1096	1.805	1.9390	1.6720	1		1	1	1		
		COSSURA SOYERI	17.5	7	28	.001	.0004	.0020							
		CAPITELLA SP.	1.5	1	2	.001	.0010	.0004							
		MEDIOMASTUS CALIFORNIENSI	6.5	6	7	.002	.0030	.0010							
		EUCLYMENINAE	.5	1		.000	.0004								
		OWENIA FUSIFORMIS	10.5	14	7	.046	.0660	.0270							
		PECTINARIA GRANULATA	.5		1	.003		.0060							
		AMPHARETE LABROPS	1.0	2		.001	.0020								
		TEREBELLIDES STROEMI	9.5	10	9	.011	.0100	.0120							
	SUM		1704.5	1699	1710	3.896	4.5516	3.2414							4.5

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STATION	TAXONOMIC ORDER	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	GASTROPODA	ALVINIA SP.	5.0	10		.003	.0070								
	SUM		5.0	10		.003	.0070								
	BIVALVIA														4.5
		MODIOLUS RECTUS	1.0		2	.000		.0010							
		AXINOPSIDA SERRICATA	11.0	11	11	.043	.0330	.0530							
		MYSELLA TUMIDA	43.0	50	36	.127	.0690	.1860							
		MACOMA SP.	12.0	17	7	.825	1.5700	.0810	1				1		
		MACOMA NASUTA	1.5	1	2	4.542	4.9240	4.1610	1				1	1	
		TELLINA CARPENTERI	1.5	2	1	.003	.0040	.0030							
		PSEPHIDIA LORDI	1.0	2		.001	.0020								
	SUM		71.0	83	59	5.543	6.6020	4.4850							
	CUMACEA														4.5
		EUDORELLA SP.	12.0	22	2	.005	.0090	.0020							
		DIASTYLIS SP.	5.0	9	1	.017	.0300	.0050							
	SUM		17.0	31	3	.023	.0390	.0070							
	AMPHIPODA														4.5
		PHOTIS SP.	.5		1	.001		.0020							
		PROTOMEDEIA SP.	.5		1	.000		.0010							
	SUM		1.0		2	.001		.0030							
	DECAPODA														4.5
		UPOGEBIA PUGETTENSIS	1.0		2	.918		1.8370							
		CALLIANASSA CALIFORNIENSI	1.0	1	1	12.043	3.8740	20.2120	1				1	1	
		BRACHYURA (JUVENILES)	14.0	18	10	.013	.0150	.0080							
		PINNIXA OCCIDENTALIS	5.0	6	4	.059	.0680	.0490							
		SCLEROPLAX GRANULATA	10.5	9	12	.061	.0510	.0710							
	SUM		31.5	34	29	13.094	4.0120	22.1770							
	PRIAPULIDA	PRIAPULUS CAUDATUS	.5	1		.015	.0310								4.5
	SUM		.5	1		.015	.0310								
TOT:			904.3	1859	1804	22.588	15.2606	29.9154	40	33	33	33			4.5
E04	POLYCHAETA														4.5
		ETEONE LONGA	.5	1		.001	.0020								
		GYPTIS BREVIPALPA	1.5	1	2	.002	.0010	.0030							
		OPHIODROMUS PUGETTENSIS	2.5	3	2	.008	.0040	.0130							

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

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                     BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                              COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TAXONOMIC GROUP  TAXON
TION                                            MEAN  REP 1  REP 2    MEAN    REP 1    REP 2  TOTAL MEAN REP1 REP2 W1 W2 DPTH
                                               COUNT  COUNT  COUNT  WEIGHT   WEIGHT   WEIGHT    NSP  NSP  NSP  NSP        (M)
                                              N/0.1M2               G/0.1M2  (SEE B)          SEE C

                      NEPHTYS LONGOSETOSA         6.5      4      9    .014    .0130    .0160
                      GLYCINDE PICTA             13.0     16     10    .363    .3760    .3510
                      CORVILLEA SP.              10.0      8     12    .031    .0150    .0470
                      PARAPRIONOSPIO PINNATA      1.5      3           .055    .1110
                      THARYX SP.                408.0    501    315   1.743   1.9130   1.5740     1         1    1  1  1
                      SCALIBREGMA INFLATUM         .5             1    .013             .0260
                      ARMANDIA BREVIS              .5             1    .002             .0050
                      CAPITELLA SP.                .5             1    .000             .0004
                      AMPHARETE LABROPS            .5      1           .005    .0100
                      AMPHARETE FINMARCHICA       1.0      1      1    .002    .0020    .0030
     SUM                                        446.5    539    354   2.243   2.4470   2.0384
     BIVALVIA                                                                                                             11.5
                      MACOMA SP.                 13.0     15     11   3.860   7.4910    .2300     1                 1
                      MACOMA NASUTA               2.5             5   2.571            5.1430     1                    1
     SUM                                         15.5     15     16   6.432   7.4910   5.3730
     CUMACEA                                                                                                              11.5
                      EUDORELLA SP.                .5      1           .000    .0010
                      DIASTYLIS SP.               1.5      2      1    .003    .0020    .0040
     SUM                                          2.0      3      1    .003    .0030    .0040
     AMPHIPODA        WESTWOODILLA CAECULA         .5      1           .000    .0004                                      11.5
     SUM                                           .5      1           .000    .0004
     DECAPODA         BRACHYURA (JUVENILES)       1.5      3           .001    .0020                                      11.5
     SUM                                          1.5      3           .001    .0020
     OTHER ARTHROPODA NEBALIA PUGETTENSIS         2.0      3      1    .001    .0010    .0004                             11.5
     SUM                                          2.0      3      1    .001    .0010    .0004
TOT:                                            191.6    564    372   8.680   9.9444   7.4158    20   15   16   14        11.5
E06  NEMERTEA         NEMERTEA                    4.0      2      6    .052    .0370    .0670                             11.5
     SUM                                          4.0      2      6    .052    .0370    .0670
     POLYCHAETA       PHOLOE MINUTA               9.0      9      9    .011    .0110    .0120                             12.3

                                                A: E05 AND E10 NOT PROCESSED.
                                                B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                                                   TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                                C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                                   MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
                                                   DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
                                                   DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                                   OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER
                                                   "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
		STECAE LCACA	44.0	48	40	.104	.0160	.1930							
		CYPTIS BREVIPALPA	2.0	4		.008	.0170								
		OPHIODROMUS PUGETTENSIS	11.5	6	17	.046	.0200	.0720							
		NEREIS BRANDTI	.5	1		3.184	6.3680		1				1		
		NEREIS PROCERA	.5	1		.001	.0020								
		NEPHTYS LONGOSETOSA	9.0	12	6	.005	.0090	.0020							
		GLYCERA CAPITATA	.5		1	.001		.0030							
		GLYCINDE PICTA	55.5	66	45	.694	.6400	.7490	1					1	
		LUMBRINERIS SP.	6.5	2	11	.050	.0270	.0740							
		DORVILLEA SP.	1.5		3	.005		.0100							
		DORVILLEA ANNULATA	2.0	4		.007	.0150								
		TAUBERIA GRACILIS	.5	1		.000	.0004								
		PRIONOSPIO STEENSTRUPI	1.5	1	2	.001	.0010	.0004							
		PARAPRIONOSPIO PINNATA	4.0	7	1	.112	.2120	.0120							
		CIRRATULUS CIRRATUS	15.5	22	9	.011	.0180	.0050							
		THARYX SP.	1466.0	1270	1662	3.281	2.8390	3.7240	1		1	1	1	1	
		CHAETOZONE SP.	.5	1		.000	.0004								
		CAPITELLA SP.	11.5	10	13	.003	.0030	.0040							
		HETEROMASTUS FILOBRANCHUS	1.5	2	1	.336	.4850	.1870							
		MEDIOMASTUS CALIFORNIENSI	1.0		2	.000		.0010							
		PRAXILLELLA AFFINIS	.5	1		.000	.0004								
		EUCLYMENINAE	1.5		3	.000		.0004							
		OWENIA FUSIFORMIS	4.5	8	1	.001	.0010	.0004							
		PECTINARIA GRANULATA	1.0		2	.013		.0260							
		AMPHARETE FINMARCHICA	2.0		4	.001		.0020							
		AMPHICTEIS SCAPHOBRANCHIA	3.0	5	1	.146	.1780	.1140							
		MELINNA ELISABETHAE	3.0	3	3	.002	.0030	.0010							
		ASABELLIDES SIBIRICA	1.0		2	.000		.0010							
		PISTA CRISTATA	5.0	1	9	.081	.0160	.1470							
		TEREBELLIDES STROEMI	11.5	13	10	.005	.0080	.0020							
SUM			1677.5	1458	1857	8.116	10.9502	5.3422							
	GASTROPODA	ALVINIA SP.	61.5	47	76	.086	.0660	.1060							12.3
		TURBONILLA SP.	5.5	6	5	.004	.0030	.0060							
SUM			67.0	53	81	.090	.0690	.1120							
	BIVALVIA	AXINOPSIDA SERRICATA	43.0	49	37	.089	.0730	.1060							12.3
		MYSELLA TUMIDA	2.0	3	1	.001	.0010	.0010							
		CLINOCARDIUM SP.	1.0		2	.018		.0360							
		MACOMA SP.	8.5	10	7	.137	.0930	.1820							

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER
"REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

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                         BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                                COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TAXONOMIC GROUP  TAXON
TION                                          MEAN  REP 1 REP 2    MEAN    REP 1     REP 2 TOTAL MEAN REP1 REP2 W1 W2 DPTH
                                             COUNT  COUNT COUNT   WEIGHT   WEIGHT   WEIGHT   NSP NSP   NSP  NSP        (M)
                                            #/0.1M2               G/0.1M2  (SEE B)          SEE C
                      TRANSENNELLA TANTILLA   10.5    21            .005    .0190
                      SAXIDOMUS GIGANTEUS       .5     1            .002    .0040
                      PSEPHIDIA LORDI         42.5           85     .034             .0680
                      MYA ARENARIA              .5            1     .041             .0830
                      LYONSIA CALIFORNICA       .5            1     .001             .0030
     SUM                                     109.0    84    134     .334    .1850    .4790                           12.3
     OSTRACODA        MYODOCOPA               23.5     9     38     .022    .0060    .0390
     SUM                                      23.5     9     38     .022    .0060    .0390                           12.3
     CUMACEA          EUDORELLA SP.           15.5    19     12     .003    .0030    .0030
                      DIASTYLIS SP.            2.0            4     .005             .0110
     SUM                                      17.5    19     16     .008    .0030    .0140                           12.3
     ISOPODA          MUNNOGONIUM WALDRONENSE  2.5     1      4     .001    .0004    .0010
     SUM                                       2.5     1      4     .001    .0004    .0010                           12.3
     AMPHIPODA        PHOTIS SP.               2.5     2      3     .003    .0020    .0040
                      PROTOMEDEIA SP.         12.5    19      6     .025    .0540    .0160
                      WESTWOODILLA CAECULA     3.0     4      2     .004    .0030    .0050
                      TRITELLA PILIMANA         .5            1     .000             .0004
     SUM                                      19.5    25     12     .042    .0590    .0254                           12.3
     DECAPODA         BRACHYURA (JUVENILES)   26.5    28     25     .016    .0120    .0190
                      PINNIXA OCCIDENTALIS     4.5     5      4     .024    .0290    .0190
     SUM                                      31.0    33     29     .040    .0420    .0380                           12.3
     PRIAPULIDA       PRIAPULUS CAUDATUS        .5     1            .010    .0210
     SUM                                        .5     1            .010    .0210                                  12.3
TOT:                                        1094.6  1725   2177    6.717  11.3166   6.1176   54   43   41   44        12.3
EO7  POLYCHAETA       NEPHTYS LONGOSETOSA       .5            1     .001             .0030
                      GLYCINDE PICTA           3.0     5      1     .080    .1550    .0020
                      DORVILLEA SP.             .5     1            .000    .0010

                                              A: EO5 AND E10 NOT PROCESSED.
                                              B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                                                 TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                              C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                                 MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
                                                 DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
                                                 DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                                 OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER
                                                 "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
                         BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                               COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2
STA- TAXONOMIC GROUP  TAXON
TION
                                             MEAN  REP 1 REP 2    MEAN     REP 1     REP 2  TOTAL MEAN REP1 REP2 W1 W2 DPTH
                                            COUNT  COUNT COUNT   WEIGHT    WEIGHT    WEIGHT   NSP  NSP  NSP  NSP        (M)
                                           #/0.1M2              G/0.1M2   (SEE B)            SEE C

                    PARAPRIONOSPIO PINNATA     .5      1          .001     .0030
                    THARYX SP.              153.5    233     74    .961    1.6030     .3200     1         1    1   1  1
     SUM                                    158.0    240     76   1.045    1.7650     .3250
     BIVALVIA       CLINOCARDIUM SP.           .5             1    .041               .0830     1                     1 11.3
                    MACOMA SP.                2.0      3      1    .183     .3550     .0120     1                  1
     SUM                                      2.5      3      2    .225     .3550     .0950
     CUMACEA        DIASTYLIS SP.              .5      1           .000     .0010                                      11.3
     SUM                                       .5      1           .000     .0010
     DECAPODA       CRANGON FRANCISCORUM       .5      1           .297     .5940               1                  1   11.3
                    BRACHYURA (JUVENILES)     1.0             2    .001               .0030
     SUM                                      1.5      1      2    .298     .5940     .0030
TOT:                                         45.6    245     80   1.569    2.7150     .4230    10    7    7    6        11.3
EC8  NEMERTEA       NEMERTEA                  2.5      2      3    .020     .0070     .0340                            11.3
     SUM                                      2.5      2      3    .020     .0070     .0340
     POLYCHAETA     PHOLOE MINUTA             1.0      2           .000     .0010                                      13.6
                    ANAITIDES MACULATA        1.0             2    .006               .0120
                    ETEONE LONGA             15.5     21     10    .062     .0870     .0400
                    EULALIA NIGRIMACULATA     1.5             3    .004               .0090
                    GYPTIS BREVIPALPA         1.0      2           .000     .0010
                    OPHIODROMUS PUGETTENSIS   4.0      7      1    .034     .0590     .0090
                    NEREIS PROCERA            1.5      2      1    .012     .0210     .0030
                    NEPHTYS LONGOSETOSA        .5      1           .000     .0010
                    NEPHTYS FERRUGINEA         .5             1   2.311              4.6220     1                     1
                    GLYCINDE PICTA           25.0     33     17    .217     .2540     .1810
                    ONUPHIS IRIDESCENS         .5             1    .004               .0090
                    LUMBRINERIS SP.           2.5      4      1    .011     .0160     .0060
                    POLYDORA SOCIALIS         1.0             2    .005               .0100
                    POLYDORA CARDALIA         2.5      2      3    .055     .0400     .0700
                    THARYX SP.             1595.0   1920   1270   2.400    2.4620    2.3380     1         1    1   1  1
                    COSSURA SOYERI             .5      1           .000     .0004
                    CAPITELLA SP.             2.0      2      2    .001     .0010     .0020

                                         A: EC5 AND E1C NOT PROCESSED.
                                         B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                                            TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                         C: TOTAL: TOTAL # OF TAXA IN 2 REPLICATES.
                                            MEAN: MEAN # OF TAXA IN 2 REPLICATES.
                                            DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
                                            DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                            OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER
                                            "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
		HETEROMASTUS FILIFORMIS	1.0		2	.005		.0100							
		HETEROMASTUS FILOBRANCHUS	2.5	2	3	.034	.0550	.0140							
		EUCLYMENINAE	5.5	5	6	.014	.0040	.0250							
		OWENIA FUSIFORMIS	40.5	61	20	.068	.1020	.0350							
		PECTINARIA GRANULATA	1.5	2	1	.050	.0910	.0090							
		AMAGE ANOPS	.5		1	.022		.0450							
		AMPHARETE LABROPS	.5	1		.003	.0070								
		AMPHARETE FINMARCHICA	.5	1		.000	.0010								
		AMPHICTEIS SCAPHOBRANCHIA	1.5	2	1	.069	.0630	.0760							
		MELINNA ELISABETHAE	4.0	5	3	.037	.0390	.0350							
		PISTA CRISTATA	1.5	3		.004	.0080								
		POLYCIRRUS SP.	.5		1	.005		.0110							
		TEREBELLIDES STROEMI	7.5	15		.004	.0090								
		POTAMILLA OCELLATA	4.5	2	7	.013	.0070	.0190							
	SUM		1727.5	2056	1399	5.459	3.3284	7.5900							13.6
	GASTROPODA	ALVINIA SP.	14.5	29		.014	.0280								
		ODOSTOMIA SP.	1.0		2	.002		.0040							
		TURBONILLA SP.	3.5	7		.004	.0080								
		CYLICHNA SP.	.5	1		.000	.0004								
		GASTROPTERON PACIFICUM	.5	1		.002	.0040								
	SUM		20.0	38	2	.022	.0404	.0040							13.5
	BIVALVIA	AXINOPSIDA SERRICATA	43.5	61	26	.038	.0410	.0360							
		MYSELLA TUMIDA	.5	1		.000	.0004								
		MACOMA SP.	8.0	14	2	.047	.0460	.0490							
		SAXIDOMUS GIGANTEUS	.5		1	.921		1.8420	1					1	
		PSEPHIDIA LORDI	11.5	12	11	.059	.0350	.0830							
		MYA ARENARIA	4.5	4	5	.922	.7790	1.0660	1				1		
		LYONSIA CALIFORNICA	1.0	1	1	.002	.0004	.0040							
	SUM		69.5	93	46	1.991	.9018	3.0800							13.6
	OSTRACODA	MYODOCOPA	17.5	28	7	.015	.0210	.0090							
	SUM		17.5	28	7	.015	.0210	.0090							13.6
	CUMACEA	EUDORELLA SP.	7.0	7	7	.004	.0060	.0030							
		DIASTYLIS SP.	3.5	6	1	.010	.0180	.0020							

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	SUM		10.5	13	8	.014	.0240	.0050							
	ISOPODA	MUNNOGONIUM WALDRONENSE	1.0	2		.000	.0010								13.6
	SUM		1.0	2		.000	.0010								
	AMPHIPODA	PROTOMEDEIA SP.	71.0	102	40	.173	.2190	.1270							13.6
		WESTWOODILLA CAECULA	.5	1		.000	.0004								
		DULICHIA SP.	1.0	1	1	.001	.0004	.0010							
	SUM		72.5	104	41	.174	.2198	.1280							
	DECAPODA	CRANGON NIGRICAUDA	.5	1		.001	.0030								13.6
		BRACHYURA (JUVENILES)	33.5	54	13	.029	.0490	.0080							
		PUGETTIA GRACILIS	.5		1	.003		.0060							
		PINNIXA OCCIDENTALIS	6.0	8	4	.043	.0540	.0320							
	SUM		40.5	63	18	.076	.1060	.0460							
	OPHIUROIDEA	AMPHIURIDAE	10.5	20	1	.455	.9070	.0040	1				1		13.6
	SUM		10.5	20	1	.455	.9070	.0040							
TOT:			749.3	2459	1485	6.228	5.5564	10.9000	56	43	45	40			13.6
E09	CNIDARIA	HALCAMPA DECEMTENTACULATA	.5		1	.022		.0450							13.6
	SUM		.5		1	.022		.0450							
	NEMERTEA	NEMERTEA	5.0	6	4	.181	.0570	.3060							13.6
	SUM		5.0	6	4	.181	.0570	.3060							
	POLYCHAETA	EUNOE UNISERIATA	.5	1		.001	.0020								13.6
		PHOLOE MINUTA	4.5	4	5	.004	.0030	.0060							
		ETEONE LONGA	2.5	1	4	.004	.0010	.0080							
		GYPTIS BREVIPALPA	1.0	2		.000	.0010								
		OPHIODROMUS PUGETTENSIS	.5		1	.000		.0010							
		NEPHTYS LONGOSETOSA	2.5	3	2	.001	.0020	.0010							
		GLYCERA CAPITATA	.5		1	.159		.3190							
		GLYCINDE PICTA	25.0	25	25	.563	.6770	.4490	1		1		1	1	
		LUMBRINERIS SP.	1.0	1	1	.001	.0010	.0010							

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
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DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
		POLYDORA CARDALIA	.5		1	.021		.0430							
		PRIONOSPIO STEENSTRUPI	.5		1	.000		.0010							
		SPIOPHANES BERKELEYORUM	1.0	2		.000	.0010								
		PARAPRIONOSPIO PINNATA	1.5	2	1	.006	.0110	.0004							
		CIRRATULUS CIRRATUS	.5	1		.000	.0010								
		THARYX SP.	12.0	3	21	.011	.0050	.0180							
		HETEROMASTUS FILOBRANCHUS	1.5	1	2	.353	.6510	.0150	1				1		
		MEDIOMASTUS CALIFORNIENSI	.5	1		.000	.0004								
		PRAXILLELLA AFFINIS	.5		1	.000		.0004							
		EUCLYMENINAE	.5		1	.000		.0004							
		PECTINARIA GRANULATA	1.0	1	1	.001	.0004	.0020							
		AMPHICTEIS SCAPHOBRANCHIA	1.0		2	.279		.5580	1					1	
		PISTA CRISTATA	1.0	1	1	.001	.0010	.0020							
		TEREBELLIDES STROEMI	2.0		4	.005		.0110							
		EUCHONE INCOLOR	.5		1	.000		.0004							
	SUM		62.5	49	76	1.417	1.3578	1.4266							13.6
	GASTROPODA	ODOSTOMIA SP.	1.5		3	.000		.0010							
		CYLICHNA SP.	5.0	2	8	.053	.0430	.0630							
		GASTROPTERON PACIFICUM	.5		1	.002		.0050							
	SUM		7.0	2	12	.056	.0430	.0690							13.6
	BIVALVIA	NUCULA TENUIS	2.5	1	4	.099	.0660	.1300							
		AXINOPSIDA SERRICATA	52.5	25	80	.376	.2470	.5050	1		1	1		1	
		MYSELLA TUMIDA	2.0	1	3	.003	.0020	.0040							
		CLINOCARDIUM SP.	.5		1	.004		.0090							
		MACOMA SP.	12.0	11	13	.069	.0800	.0580							
		MACOMA NASUTA	.5	1		1.213	2.4270		1				1		
		PSEPHIDIA LORDI	30.0	17	43	.242	.1780	.3070	1			1			
		MYA ARENARIA	1.5		3	.134		.2690							
	SUM		101.5	56	147	2.141	3.0000	1.2920							13.6
	OSTRACODA	MYODOCOPA	17.5	15	20	.012	.0110	.0130							
	SUM		17.5	15	20	.012	.0110	.0130							13.6
	CUMACEA	EUDORELLA SP.	59.0	47	71	.038	.0310	.0460	1		1	1			
	SUM		59.0	47	71	.038	.0310	.0460							13.6

A: F05 AND F10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

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                            BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                                  COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2
STA- TAXONOMIC GROUP  TAXON
TION
                                                          MEAN  REP 1  REP 2    MEAN     REP 1     REP 2  TOTAL MEAN REP1 REP2 W1 W2 DPTH
                                                         COUNT  COUNT  COUNT  WEIGHT    WEIGHT    WEIGHT    NSP  NSP  NSP  NSP        (M)
                                                        #/0.1M2                G/0.1M2  (SEE B)           SEE C
     AMPHIPODA        PHOTIS SP.                            1.0      1      1    .001     .0020     .0004
                      PROTOMEDEIA SP.                       2.0      3      1    .002     .0030     .0020
                      WESTWOODILLA CAECULA                   .5             1    .000               .0010
                      HETEROPHOXUS OCULATUS                 1.0             2    .000               .0010
                      FOXIPHALUS COGNATUS                    .5      1           .001     .0020
     SUM                                                    5.0      5      5    .006     .0070     .0044                             13.6
     DECAPODA         BRACHYURA (JUVENILES)                 9.0      8     10    .005     .0040     .0060
                      PINNIXA OCCIDENTALIS                  1.5      1      2    .003     .0030     .0030
     SUM                                                   10.5      9     12    .008     .0070     .0090                             13.6
     OPHIUROIDEA      AMPHIURIDAE                           3.0      1      5    .033     .0360     .0310
     SUM                                                    3.0      1      5    .032     .0360     .0310                             13.6
TOT:                                                      183.5    190    177   3.916    4.5898    3.2420     47   36   31   40        13.6
E11  CNIDARIA         HALCAMPA DECEMTENTACULATA              .5             1    .155               .3110
     SUM                                                     .5             1    .155               .3110                             13.6
     PLATYHELMINTHES  PLATYHELMINTHES                        .5      1           .003     .0070
     SUM                                                     .5      1           .003     .0070                                       14.8
     NEMERTEA         NEMERTEA                              1.5             3    .854              1.7080
     SUM                                                    1.5             3    .854              1.7080                             14.8
     POLYCHAETA       HARMOTHOE LUNULATA                     .5      1           .005     .0110
                      PHOLOE MINUTA                         4.5      5      4    .012     .0090     .0160
                      STHENELAIS TERTIAGLABRA                .5             1    .025               .0500
                      ETEONE LONGA                          1.0             2    .001               .0020
                      OPHIODROMUS PUGETTENSIS               2.0             4    .005               .0100
                      PILARGIS BERKELEYAE                    .5             1    .004               .0090
                      NEREIS PROCERA                         .5             1    .016               .0320
                      GLYCERA CAPITATA                       .5             1    .060               .1200
                      GLYCINDE PICTA                        1.5      2      1    .025     .0300     .0210
                      GONIADA MACULATA                      1.0             2    .117               .2350

                                                   A: E05 AND E10 NOT PROCESSED.
                                                   B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                                                      TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                                   C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                                      MEAN: MEAN # OF TAXA IN 2 REPLICATES.
                                                      DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
                                                      DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                                      OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER
                                                      "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
		CALPHIS IRIDESCENS	.5		1	.471		.9420							
		LUMBRINERIS SP.	12.5	8	17	.110	.1060	.1140							
		SCOLOPLOS PUGETTENSIS	1.5		3	.023		.0460							
		TAUBERIA GRACILIS	7.5		15	.001		.0030							
		LAONICE CIRRATA	3.5	2	5	.242	.2340	.2510							
		PRIONOSPIO CIRRIFERA	1.5	1	2	.001	.0020	.0010							
		PRIONOSPIO STEENSTRUPI	1.0	2		.001	.0020								
		SPIOPHANES BERKELEYORUM	.5		1	.000		.0004							
		PARAPRIONOSPIO PINNATA	3.0	1	5	.219	.0840	.3540							
		MAGELONA SP.	4.5		9	.031		.0620							
		THARYX SP.	2.0	1	3	.007	.0010	.0140							
		SCALIBREGMA INFLATUM	.5		1	.001		.0020							
		AMMOTRYPANE AULOGASTER	.5		1	.082		.1640							
		STERNASPIS SCUTATA	1.0		2	.153		.3060							
		HETEROMASTUS FILIFORMIS	4.5		9	.002		.0040							
		MEDIOMASTUS SP.	1.0	2		.000	.0010								
		PARANTCLLA AMERICANA	.5		1	.034		.0680							
		MALDANE GLEBIFEX	.5	1		.001	.0030								
		PRAXILLELLA AFFINIS	4.5		9	1.010		2.0210							
		OWENIA FUSIFORMIS	31.0	31	31	.139	.0540	.2250							
		PECTINARIA GRANULATA	.5		1	.000		.0010							
		AMPHARETE FINMARCHICA	.5		1	.002		.0050							
		MELINNA ELISABETHAE	.5		1	.010		.0210							
		POLYCIRRUS SP.	.5		1	.002		.0040							
	SUM		96.5	57	136	2.825	.5370	5.1124							
	GASTROPODA	ODOSTOMIA SP.	.5	1		.001	.0020								14.8
	SUM		.5	1		.001	.0020								
	BIVALVIA	NUCULA TENUIS	2.5	4	1	.025	.0490	.0010							14.8
		NUCULANA MINUTA	.5	1		.000	.0010								
		YOLDIA SCISSURATA	2.0	3	1	1.148	2.2450	.0520	1				1		
		AXINOPSIDA SERRICATA	.5		1	.001		.0030							
		MYSELLA TUMIDA	2.0	4		.001	.0030								
		SOLEN SICARIUS	.5		1	4.590		9.1800	1					1	
		MACOMA SP.	1.5	1	2	.001	.0004	.0020							
		TELLINA CARPENTERI	.5		1	.006		.0130							
		PSEPHIDIA LORDI	.5	1		.000	.0004								
	SUM		10.5	14	7	5.775	2.2988	9.2510							
															14.8

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP": TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	OSTRACODA	MYODOCOPA	59.0	68	50	.021	.0210	.0220	1		1				
	SUM		59.0	68	50	.021	.0210	.0220							14.9
	CUMACEA	EUDORELLA SP.	65.5	121	10	.034	.0600	.0080	1		1				
	SUM		65.5	121	10	.034	.0600	.0080							14.8
	AMPHIPODA	AMPELISCA AGASSIZI	.5		1	.000		.0010							
		PONTOPOREIA FEMORATA	.5	1		.000	.0010								
		PROTOMEDEIA SP.	10.5	19	2	.021	.0390	.0040							
		LYSIANASSIDAE	1.0		2	.000		.0010							
		ORCHOMENE SP.	6.0	12		.008	.0170								
		WESTWOODILLA CAECULA	1.5	1	2	.001	.0010	.0010							
		PHOXOCEPHALIDAE	2.0		4	.002		.0040							
		HETEROPHOXUS OCULATUS	17.5	27	8	.029	.0360	.0200							
		FOXIPHALUS COGNATUS	1.5	3		.000	.0010								
		RHEPOXYNIUS SP.	4.5		9	.002		.0050							
		DULICHIA SP.	.5	1		.000	.0004								
	SUM		46.0	64	28	.065	.0954	.0360							14.9
	DECAPODA	BRACHYURA (JUVENILES)	139.0	84	194	.115	.0690	.1700	1		1	1			
		PINNIXA OCCIDENTALIS	23.5	11	36	.094	.0410	.1480							
	SUM		162.5	95	230	.214	.1100	.3180							14.8
	SIPUNCULA	SIPUNCULA	.5		1	.010		.0210							
	SUM		.5		1	.010		.0210							14.9
	PRIAPULIDA	PRIAPULUS CAUDATUS	.5		1	.077		.1540							
	SUM		.5		1	.077		.1540							14.8
	OPHIUROIDEA	AMPHIURIDAE	53.0	48	58	4.859	5.2240	4.4940	1		1	1	1	1	
	SUM		53.0	48	58	4.859	5.2240	4.4940							14.8
	HOLOTHUROIDEA	PENTAMERA POPULIFERA	3.5	3	4	1.227	.2390	2.2150							

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT,UNDER "W1" OR "W2".

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                    BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                          COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TAXONOMIC GROUP  TAXON                        MEAN  REP 1 REP 2   MEAN    REP 1    REP 2  TOTAL MEAN REP1 REP2 W1 W2 DPTH
TION                                              COUNT COUNT COUNT  WEIGHT   WEIGHT   WEIGHT    NSP  NSP  NSP  NSP       (M)
                                                 #/0.1M2              G/0.1M2  (SEE B)          SEE C
     SUM
                                                   3.5     3     4   1.227    .2390   2.2150                            14.8
TOT:
                                                 271.5   472   525  16.122   8.5932  23.6504     66   43   33   53      14.8
E12  CNIDARIA         HALCAMPA DECEMTENTACULATA      .5     1           .004    .0080
     SUM
                                                    .5     1           .004    .0080                                    16.1
     NEMERTEA         NEMERTEA                       .5           1     .014             .0280
     SUM
                                                    .5           1     .014             .0280                           16.1
     POLYCHAETA       PHOLOE MINUTA                 1.0     1     1     .004    .0050    .0040
                      ANAITIDES MACULATA            1.0     2           .004    .0090
                      ANAITIDES MULTISERIATA         .5     1           .003    .0070
                      NEPHTYS LONGOSETOSA           1.0     1     1     .004    .0030    .0050
                      GLYCINDE PICTA                2.0     2     2     .276    .1530    .3990      1               1
                      LUMBRINERIS SP.               6.5     6     7     .040    .0250    .0560
                      TAUBERIA GRACILIS             2.0     2     2     .001    .0010    .0010
                      PRIONOSPIO CIRRIFERA          4.0           8     .002             .0040
                      PRIONOSPIO STEENSTRUPI        1.0     2           .000    .0010
                      PARAPRIONOSPIO PINNATA        1.0           2     .132             .2640
                      SCALIBREGMA INFLATUM           .5     1           .003    .0070
                      ARMANDIA BREVIS               7.0    12     2     .009    .0130    .0050
                      CHENIA FUSIFORMIS             2.0     2     2     .010    .0100    .0110
                      TEREBELLIDES STROEMI           .5     1           .001    .0030
     SUM
                                                  30.0    33    27     .493    .2370    .7490                           16.1
     GASTROPODA       CYLICHNA SP.                  1.5     2     1     .086    .1410    .0310
     SUM
                                                   1.5     2     1     .086    .1410    .0310                           16.1
     BIVALVIA         ACILA CASTRENSIS              1.5     3           .345    .6900              1             1
                      NUCULA TENUIS                  .5     1           .010    .0210
                      NUCULANA MINUTA                .5     1           .003    .0060
                      AXINOPSIDA SERICATA           1.0     2           .006    .0130
                      MYSELLA TUMIDA                1.0     2           .004    .0090
                      MACOMA NASUTA                 1.0     2           .752   1.5050              1             1
                      TRANSENNELLA TANTILLA          .5     1           .001    .0030
                      PSEPHIDIA LORDI              28.0    33    23     .026    .0100    .0430      1      1    1
                      LYONSIA CALIFORNICA            .5     1           .006    .0130

                                          A: E05 AND E10 NOT PROCESSED.
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                                          C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                             MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
                                             DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
                                             DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                             OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER
                                             "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
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                        BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                               COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TAXONOMIC GROUP  TAXON
TION                                            MEAN  REP 1 REP 2   MEAN    REP 1    REP 2  TOTAL MEAN REP1 REP2 W1 W2 DPTH
                                               COUNT  COUNT COUNT  WEIGHT   WEIGHT   WEIGHT   NSP  NSP  NSP  NSP        (M)
                                              #/0.1M2              G/0.1M2 (SEE B)          SEE C

     SUM                                        34.5    46    23   1.156   2.2700   .0430                              16.1
     OSTRACODA         MYODOCOPA                 7.0     9     5    .003    .0060   .0004
     SUM                                         7.0     9     5    .003    .0060   .0004                              16.1
     CUMACEA           EUDORELLA SP.            27.0    37    17    .016    .0210   .0110     1         1    1
     SUM                                        27.0    37    17    .016    .0210   .0110                              16.1
     AMPHIPODA         AMPELISCA SP.              .5           1    .002            .0040
                       PONTOPOREIA FEMORATA      8.5    14     3    .005    .0090   .0020
                       PROTOMEDEIA SP.           8.0    15     1    .012    .0230   .0010
                       ORCHOMENE SP.             9.5    19          .007    .0150
                       HETEROPHOXUS OCULATUS    18.0    23    13    .031    .0500   .0120
     SUM                                        44.5    71    18    .058    .0970   .0190                              16.1
     DECAPODA          CRANGON SP.                .5     1          .003    .0070
                       BRACHYURA (JUVENILES)    59.5    81    38    .047    .0710   .0230
                       PINNIXA OCCIDENTALIS      5.5     6     5    .025    .0370   .0140     1         1    1
     SUM                                        65.5    88    43    .076    .1150   .0370                              16.1
     OTHER ARTHROPODA  MYSIDACEA                  .5           1    .001            .0020
     SUM                                          .5           1    .001            .0020                              16.1
     OPHIUROIDEA       AMPHIURIDAE              21.5    22    21   2.146   1.6080   2.6850    1              1  1  1
     SUM                                        21.5    22    21   2.146   1.6080   2.6850                             16.1
TOT:                                            86.5   309   157   4.054   4.5030   3.6054   38   28   33   22         16.1
L01  CNIDARIA          HALCAMPA DECEMTENTACULATA  .5     1          .018    .0370
     SUM                                          .5     1          .018    .0370                                       7.6
     PLATYHELMINTHES   PLATYHELMINTHES           3.0     2     4    .012    .0070   .0170
     SUM                                         3.0     2     4    .012    .0070   .0170                               7.6

                                               A: E05 AND E10 NOT PROCESSED.
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                                               C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                                  MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
                                                  DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
                                                  DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                                  OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER
                                                  "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	NEMERTEA	NEMERTEA	7.0	8	6	.074	.0380	.1100							
	SUM		7.0	8	6	.074	.0380	.1100							7.6
	POLYCHAETA	TENONIA KITSAPENSIS	4.0	3	5	.003	.0030	.0040							
		PHOLOE MINUTA	9.0	9	7	.021	.0330	.0090							
		ETEONE LONGA	6.5	10	3	.003	.0050	.0020							
		EULALIA SP.	.5	1		.000	.0010								
		EULALIA NIGRIMACULATA	.5		1	.001		.0020							
		GYPTIS BREVIPALPA	2.0	1	3	.009	.0110	.0070							
		OPHIODROMUS PUGETTENSIS	.5	1		.004	.0080								
		PLATYNEREIS BICANALICULAT	.5	1		.005	.0110								
		NEPHTYS LONGOSETOSA	3.0		6	.002		.0040							
		GLYCINDE PICTA	35.0	21	49	.276	.0950	.4570							
		ONUPHIS SP.	1.0	2		.000	.0004								
		LUMBRINERIS SP.	5.0	2	8	.026	.0020	.0500							
		DORVILLEA ANNULATA	4.0		8	.005		.0110							
		POLYDORA CARDALIA	.5	1		.022	.0440								
		PRIONOSPIO CIRRIFERA	1.0		2	.000		.0004							
		PRIONOSPIO STEENSTRUPI	1.0	1	1	.001	.0010	.0004							
		SPIOPHANES SP.	.5	1		.000	.0004								
		SPIOPHANES BERKELEYORUM	.5		1	.021		.0430							
		PARAPRIONOSPIO PINNATA	5.0	7	3	.152	.2840	.0210							
		CIRRATULUS CIRRATUS	1.0	2		.008	.0160								
		THARYX SP.	809.5	836	783	1.545	1.4020	1.6890	1		1		1	1	
		COSSURA SOYERI	2.0		4	.000		.0010							
		CAPITELLA SP.	.5		1	.000		.0004							
		HETEROMASTUS FILOBRANCHUS	5.5	5	6	.037	.0510	.0240							
		MEDIOMASTUS CALIFORNIENSI	.5		1	.000		.0010							
		EUCLYMENINAE	.5	1		.001	.0020								
		OWENIA FUSIFORMIS	7705.5	2826	12585	6.309	5.6560	10.9630	1		1	1	1	1	
		PECTINARIA GRANULATA	3.0	5	1	.031	.0610	.0010							
		AMPHARETE LABROPS	4.5	7	2	.048	.0800	.0170							
	SUM		8611.5	3743	13480	10.537	7.7668	13.3072							7.6
	GASTROPODA	EPITONIUM TINCTUM	.5	1		.006	.0130								
		NASSARIUS MENDICUS	.5	1		.199	.3590								
		ODOSTOMIA SP.	2.5	1	4	.011	.0050	.0130							
		CYLICHNA SP.	.5	1		.029	.0580								
		AGLAJA DIOMEDEA	9.0	5	13	.069	.0170	.1220							

A: E05 AND E10 NOT PROCESSED.
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"REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STATION	TAXONOMIC GROUP	TAXON	MEAN COUNT N/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	SUM		13.0	9	17	.315	.4950	.1350							
	BIVALVIA														7.6
		YOLDIA SCISSURATA	1.0		2	.009		.0180							
		AXINOPSIDA SERRICATA	14.0	14	14	.072	.0640	.0800							
		MYSELLA TUMIDA	5.0	3	7	.003	.0020	.0050							
		MACOMA SP.	7.5	4	11	.284	.0250	.5440							
		MACOMA NASUTA	3.0	4	2	.878	.7970	.9590							
		TELLINA CARPENTERI	3.5	3	4	.017	.0110	.0230							
		PSEPHIDIA LORDI	6.5	4	9	.139	.1670	.1110							
		MYA TRUNCATA	.5		1	.066		.1330							
	SUM		41.0	32	50	1.469	1.0660	1.8730							
	OSTRACODA	MYODOCOPA	1.0	1	1	.001	.0010	.0004							7.6
	SUM		1.0	1	1	.001	.0010	.0004							
	CUMACEA	DIASTYLIS SP.	1.0	2		.001	.0030								7.6
	SUM		1.0	2		.001	.0030								
	AMPHIPODA														7.6
		PROTOMEDEIA SP.	26.5	24	29	.034	.0340	.0350							
		HETEROPHOXUS OCULATUS	1.5	2	1	.002	.0040	.0010							
		FOXIPHALUS COGNATUS	.5	1		.000	.0010								
	SUM		28.5	27	30	.037	.0390	.0360							
	DECAPODA	PINNIXA OCCIDENTALIS	1.0	2		.006	.0120								7.6
	SUM		1.0	2		.006	.0120								
	PHORONIDA	PHORONIDA	.5		1	.001		.0020							7.6
	SUM		.5		1	.001		.0020							
	OPHIUROIDEA	AMPHIURIDAE	7.0	8	6	.066	.0940	.0390							7.6
	SUM		7.0	8	6	.066	.0940	.0390							
TOT:															7.6
			6901.3	3835	13595	12.539	9.5588	15.5196	53	41	43	38			7.6

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                         BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                               COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TAXONOMIC GROUP  TAXON                          MEAN  REP 1  REP 2    MEAN     REP 1    REP 2  TOTAL MEAN REP1 REP2 W1 W2 DPTH
TION                                                COUNT  COUNT  COUNT  WEIGHT    WEIGHT   WEIGHT    NSP  NSP  NSP  NSP        (M)
                                                  #/0.1M2               G/0.1M2  (SEE B)          SEE C

L02  PLATYHELMINTHES  PLATYHELMINTHES                 1.5      3            .004     .0090
     SUM                                              1.5      3            .004     .0090                                      10.7
     NEMERTEA         NEMERTEA                        3.5      1      6     .369     .0230   .7160
     SUM                                              3.5      1      6     .369     .0230   .7160                              10.7
     POLYCHAETA       TENONIA KITSAPENSIS             2.5      3      2     .003     .0040   .0030
                      PHOLOE MINUTA                   1.5      1      2     .003     .0020   .0050
                      ETEONE LONGA                    1.5      1      2     .005     .0040   .0060
                      OPHIODROMUS PUGETTENSIS         1.0             2     .002             .0050
                      GLYCINDE PICTA                  6.5      7      6     .123     .1860   .0600
                      LUMBRINERIS SP.                 5.0      6      4     .081     .0840   .0790
                      LUMBRINERIS BICIRRATA           1.0      2           1.375    2.7500
                      POLYDORA SOCIALIS                .5             1     .000             .0010
                      PRIONOSPIO STEENSTRUPI           .5             1     .000             .0010
                      POLYDORA PROBOSCIDEA             .5      1            .014     .0280
                      SPIOPHANES BERKELEYORUM          .5      1            .000     .0004
                      PARAPRIONOSPIO PINNATA          1.5      1      2     .075     .0010   .1500
                      TROCHOCHAETA MULTISETOSA         .5      1            .002     .0040
                      THARYX SP.                    379.0    310    448    1.601    1.3030  1.9000    1         1    1
                      HETEROMASTUS FILOBRANCHUS        .5             1     .000             .0004
                      MALDANE GLEBIFEX                 .5      1            .007     .0150
                      EUCLYMENE ZONALIS                .5             1     .000             .0004
                      EUCLYMENINAE                    5.0      3      7     .107     .0560   .1590
                      OWENIA FUSIFORMIS             463.0    324    602     .191     .1000   .2820    1         1    1
                      PECTINARIA GRANULATA            1.0      2            .001     .0020
                      MELINNA ELISABETHAE              .5      1            .001     .0020
                      POTAMILLA INTERMEDIA             .5             1     .001             .0020
     SUM                                            873.5    665   1082    3.598    4.5414  2.6538                              10.7
     GASTROPODA       MITRELLA SP.                    1.5             3     .151             .3030
                      OENOPOTA LEVIDENSUS              .5             1     .007             .0150
                      ODOSTOMIA SP.                   8.5      8      9     .051     .0400   .0620
                      TURBONILLA SP.                  2.5      5            .008     .0160
                      CYLICHNA SP.                    3.0      4      2     .068     .0810   .0550
                      AGLAJA DIOMEDEA                  .5      1            .001     .0020
     SUM                                             16.5     18     15     .287     .1390   .4350                              10.7

                                                  A: E05 AND E10 NOT PROCESSED.
                                                  B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
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                                                     MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
                                                     DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
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                                                     "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	BIVALVIA	NUCULA TENUIS	1.5		3	.005		.0100							
		YOLDIA SCISSURATA	.5		1	.003		.0070							
		AXINOPSIDA SERRICATA	2.5		5	.018		.0360							
		MYSELLA TUMIDA	.5	1		.000	.0010								
		MACOMA NASUTA	.5		1	.050		.1000							
		PSEPHIDIA LORDI	34.0	40	28	.761	.8740	.6490							
		HUMILARIA KENNERLYI	.5	1		13.872	27.7440		1				1		
	SUM		40.0	42	38	14.710	28.6190	.8020							10.7
	OSTRACODA	MYODOCOPA	33.5	49	18	.022	.0260	.0190							
	SUM		33.5	49	18	.022	.0260	.0190							10.7
	CUMACEA	EUDORELLA SP.	4.0		8	.001		.0030							
		DIASTYLIS SP.	1.0	1	1	.002	.0010	.0030							
	SUM		5.0	1	9	.003	.0010	.0060							10.7
	AMPHIPODA	PROTOMEDEIA SP.	51.0	64	38	.102	.1380	.0670							
		HETEROPHOXUS OCULATUS	3.5	2	5	.003	.0050	.0020							
		FOXIPHALUS COGNATUS	.5		1	.000		.0010							
	SUM		55.0	66	44	.106	.1430	.0700							10.7
	DECAPODA	PINNIXA OCCIDENTALIS	30.5	34	27	.284	.3500	.2180							
	SUM		30.5	34	27	.284	.3500	.2180							10.7
	PRIAPULIDA	PRIAPULUS CAUDATUS	1.0	2		1.842	3.6850								
	SUM		1.0	2		1.842	3.6850								10.7
	OPHIUROIDEA	AMPHIURIDAE	30.0	21	39	.414	.2790	.5500							
	SUM		30.0	21	39	.414	.2790	.5500							10.7
	HOLOTHUROIDEA	MOLPADIA INTERMEDIA	.5		1	13.276		26.5520	1					1	
	SUM		.5		1	13.276		26.5520							10.7

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXA	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
TOT:			644.5	902	1279	34.919	37.8154	32.0218	47	33	22	34			10.7
LO3	PLATYHELMINTHES	PLATYHELMINTHES	2.0	3	1	.008	.0150	.0010							
	SUM		2.0	3	1	.008	.0150	.0010							14.6
	NEMERTEA	NEMERTEA	1.0	1	1	.007	.0120	.0030							
	SUM		1.0	1	1	.007	.0120	.0030							14.6
	POLYCHAETA	POLYEUNOA TUTA	.5	1		.085	.1710								
		TENONIA KITSAPENSIS	1.5	3		.003	.0070								
		PHOLOE MINUTA	3.0	3	3	.013	.0170	.0090							
		ETEONE LONGA	1.0	1	1	.003	.0010	.0050							
		GYPTIS BREVIPALPA	2.5	5		.001	.0030								
		NEREIS PROCERA	.5		1	.024		.0490							
		NEPHTYS LONGOSETOSA	1.0	1	1	.001	.0020	.0010							
		GLYCINDE PICTA	7.5	14	1	.329	.6550	.0030							
		LUMBRINERIS SP.	1.0	1	1	.010	.0180	.0020							
		DORVILLEA SP.	5.5	11		.019	.0380								
		PRIONOSPIO CIRRIFERA	.5	1		.000	.0010								
		POLYDORA PROBOSCIDEA	.5	1		.085	.1700								
		SPIOPHANES BERKELEYORUM	3.5	4	3	.064	.0510	.0770							
		PARAPRIONOSPIO PINNATA	.5		1	.001		.0030							
		CIRRATULUS CIRRATUS	.5	1		.001	.0030								
		THARYX SP.	448.0	295	601	1.561	1.1350	1.9870	1		1	1		1	
		ARMANDIA BREVIS	.5	1		.000	.0004								
		STERNASPIS SCUTATA	.5	1		.001	.0020								
		HETEROMASTUS FILOBRANCHUS	1.0	2		.012	.0250								
		OWENIA FUSIFORMIS	1.5	3		.001	.0020								
		PECTINARIA GRANULATA	.5		1	.001		.0020							
		EUPOLYMNIA HETEROBRANCHIA	.5	1		1.757	3.5140								
		MYXICOLA AESTHETICA	.5	1		.494	.9890								
		POTAMILLA INTERMEDIA	.5	1		.088	.1770								
		SABELLA MEDIA	1.0	2		.970	1.9400								
	SUM		484.0	354	614	5.530	8.9214	2.1380							14.6
	GASTROPODA	NASSARIUS MENDICUS	1.0	2		.318	.6360								
		ODOSTOMIA SP.	7.5	5	10	.028	.0130	.0440							
		TURBONILLA SP.	4.0	4	4	.025	.0280	.0230							
		CYLICHNA SP.	1.5	1	2	.045	.0200	.0700							

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

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                     BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                            COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TAXONOMIC GROUP  TAXON                      MEAN REP 1 REP 2    MEAN    REP 1    REP 2 TOTAL MEAN REP1 REP2 W1 W2 DPTH
TION                                            COUNT COUNT COUNT  WEIGHT   WEIGHT   WEIGHT   NSF  NSP  NSP  NSP        (M)
                                               #/0.1M2            G/0.1M2 (SEE B)          SEE C

     SUM                                         14.0    12    16    .417    .4970    .1270
     BIVALVIA        NUCULANA MINUTA               .5           1    .000             .0004                            14.6
                     YOLDIA MYALIS                 .5     1          .004    .0090
                     YOLDIA SCISSURATA            1.5     2     1    .130    .2480    .0120
                     AXINOPSIDA SERRICATA        91.5    62   121   1.011    .7310   1.2920     1         1    1     1
                     MYSELLA TUMIDA                .5           1    .000             .0010
                     MACOMA SP.                   4.5     3     6    .239    .1180    .3610
                     MACOMA NASUTA                1.0     2          .101    .2020
                     SAXIDOMUS GIGANTEUS          2.0     1     3    .096    .0410    .1310
                     PSEPHIDIA LORDI             20.0     7    33    .171    .0530    .2900
     SUM                                        122.0    78   166   1.745   1.4020   2.0874
     OSTRACODA       MYODOCOPA                    2.0           4    .001             .0020                            14.6
     SUM                                          2.0           4    .001             .0020
     CUMACEA         EUDORELLA SP.                3.5     5     2    .002    .0030    .0020                            14.6
     SUM                                          3.5     5     2    .002    .0030    .0020
     AMPHIPODA       HETEROPHOXUS OCULATUS        1.5     3          .000    .0010                                     14.6
     SUM                                          1.5     3          .000    .0010
     DECAPODA        PINNIXA OCCIDENTALIS         7.0    12     2    .034    .0650    .0030                            14.6
     SUM                                          7.0    12     2    .034    .0650    .0030
     OPHIUROIDEA     AMPHIURIDAE                 26.0    43     9    .552    .9650    .1400                            14.6
     SUM                                         26.0    43     9    .552    .9650    .1400
     HOLOTHUROIDEA   MOLPADIA INTERMEDIA           .5     1        11.690  23.3800              1                1      14.6
     SUM                                           .5     1        11.690  23.3800
TOT:                                                                                                                   14.6
                                                414.8   512   815  19.987  35.4614   4.5134    46   33   40   26
L04  CNIDARIA        PACHYCERIANTHUS FIMBRIATA    1.0     1     1    .852    .7130    .5910     1                1  1  14.6
                                              A: E05 AND F10 NOT PROCESSED.
                                              B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                                                 TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                              C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                                 MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
                                                 DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
                                                 DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                                 OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER
                                                 "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	SUM		1.0	1	1	.852	.7130	.5510							
	NEMERTEA	NEMERTEA	3.0	3	3	.279	.5240	.0320	1				1		23.8
	SUM		3.0	3	3	.279	.5260	.0320							
	POLYCHAETA	HARMOTHOE LUNULATA	1.0	1	1	.002	.0020	.0030							23.8
		PHOLOE MINUTA	.5		1	.001		.0020							
		ETEONE LONGA	.5	1		.000	.0004								
		GYPTIS BREVIPALPA	.5	1		.002	.0040								
		OPHIODROMUS PUGETTENSIS	1.0		2	.000		.0010							
		NEPHTYS LONGOSETOSA	.5	1		.000	.0004								
		HEMIPODUS BOREALIS	.5		1	.042		.0850							
		GLYCINDE PICTA	3.0	3	3	.223	.0920	.3550							
		LUMBRINERIS SP.	.5	1		.003	.0060								
		DORVILLEA SP.	2.5		5	.011		.0230							
		ARICIDEA LOPEZI	.5	1		.000	.0004								
		TAUBERIA GRACILIS	16.5	28	5	.003	.0050	.0010	1		1				
		SPIOPHANES BERKELEYORUM	.5		1	.003		.0070							
		PARAPRIONOSPIO PINNATA	1.0	1	1	.051	.0020	.1000							
		THARYX SP.	85.5	96	75	.250	.1950	.3060	1		1	1			
		PHERUSA PLUMOSA	.5	1		.037	.0740								
		STERNASPIS SCUTATA	1.0	2		.052	.1040								
		HETEROMASTUS FILOBRANCHUS	2.5	4	1	.005	.0080	.0020							
		PECTINARIA GRANULATA	.5	1		.028	.0570								
	SUM		119.0	142	96	.719	.5502	.8850							
	GASTROPODA	TURBONILLA SP.	1.5	3		.005	.0110								23.8
		CYLICHNA SP.	.5		1	.073		.1460							
		GASTROPTERON PACIFICUM	.5	1		.036	.0730								
	SUM		2.5	4	1	.115	.0840	.1460							
	BIVALVIA	ACILA CASTRENSIS	.5		1	.125		.2510							23.8
		NUCULA TENUIS	.5	1		.000	.0010								
		AXINOPSIDA SERRICATA	32.5	34	31	.792	.9070	.6780	1		1	1	1	1	
		MYSELLA TUMIDA	1.0		2	.003		.0060							
		SAXIDOMUS GIGANTEUS	1.0		2	.681		1.3630	1					1	
		PSEPHIDIA LORDI	.5	1		.000	.0010								

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
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DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

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                         BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                               COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2
STA- TAXONOMIC GROUP  TAXON
TION
                                           MEAN REP 1 REP 2    MEAN   REP 1    REP 2 TOTAL MEAN REP1 REP2 W1 W2 DPTH
                                          COUNT COUNT COUNT  WEIGHT  WEIGHT   WEIGHT   NSP  NSP  NSP  NSP        (M)
    SUM                                 #/0.1M2             G/0.1M2 (SEE B)           SEE C
                                           36.0    36    36   1.603   .9090   2.2980
    OSTRACODA       MYODOCOPA                                                                                23.8
                                            1.5     3          .000   .0004
    SUM
                                            1.5     3          .000   .0004
    AMPHIPODA       HETEROPHOXUS OCULATUS                                                                    23.8
                                            1.0     2          .000   .0010
    SUM
                                            1.0     2          .000   .0010
    DECAPODA        PINNIXA OCCIDENTALIS                                                                     23.8
                                            1.0     2          .005   .0110
    SUM
                                            1.0     2          .005   .0110
    OPHIUROIDEA     AMPHIURIDAE                                                                              23.8
                                            6.0     1    11    .146   .0580    .2240
    SUM
                                            6.0     1    11    .146   .0580    .2240
TOT:
                                           85.5   194   148   3.719  2.8526   4.5860    34   22   25   19      23.8
L05 CNIDARIA        PACHYCERIANTHUS FIMBRIATA                                                                23.3
                                            1.0           2    .625            1.2510    1
    SUM                                                                                               1
                                            1.0           2    .625            1.2510
    NEMERTEA        NEMERTEA                                                                                 18.3
                                            1.0     1     1    .001   .0004    .0010
    SUM
                                            1.0     1     1    .001   .0004    .0010
    POLYCHAETA                                                                                               18.3
                    GYPTIS BREVIPALPA       1.0           2    .000            .0004
                    NEREIS PROCERA          2.5     4     1    .101   .1600    .0430    1                 1
                    NEPHTYS LONGOSETOSA     1.0           2    .000            .0010
                    HEMIPODUS BOREALIS       .5     1          .016   .0330
                    GLYCINDE PICTA          4.0     2     6    .250   .1230    .3770    1                 1  1
                    TAUBERIA GRACILIS       1.5     1     2    .000   .0004    .0004
                    SPIOPHANES BERKELEYORUM  .5           1    .014            .0280
                    PARAPRIONOSPIO PINNATA   .5           1    .050            .1010
                    THARYX SP.             37.5    27    48    .171   .1450    .1980    1         1    1  1
                    HETEROMASTUS FILOBRANCHUS 4.0   1     7    .483   .2520    .7140    1                 1  1
    SUM
                                           53.0    36    70   1.088   .7134   1.4628
    GASTROPODA      MITRELLA SP.                                                                             18.3
                                             .5           1    .062            .1240

                                 A: E05 AND E10 NOT PROCESSED.
                                 B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                                    TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                 C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                    MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
                                    DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
                                    DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                    OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER
                                    "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STATION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
		ODOSTOMIA SP.	1.0	2		.002	.0040								
	SUM		1.5	2	1	.064	.0040	.1240							
	BIVALVIA	AXINOPSIDA SERRICATA	15.5	20	11	.276	.3320	.2210	1		1	1	1		18.3
		MYSELLA TUMIDA	.5	1		.001	.0030								
		MACOMA SP.	.5	1		.018	.0360								
	SUM		16.5	22	11	.296	.3710	.2210							
	OSTRACODA	MYODOCOPA	.5	1		.000	.0004								18.3
	SUM		.5	1		.000	.0004								
TOT:			51.6	62	85	2.074	1.0892	3.0598	18	13	12	13			18.3
LC6	NEMERTEA	NEMERTEA	.5	1		.004	.0090								18.3
	SUM		.5	1		.004	.0090								
	POLYCHAETA	NEREIS PROCERA	2.5	3	2	.024	.0320	.0160	1		1				21.9
		NEPHTYS LONGOSETOSA	1.5		3	.000		.0010							
		NEPHTYS FERRUGINEA	.5		1	.002		.0050							
		GLYCINDE PICTA	3.5	1	6	.142	.0140	.2710	1			1		1	
		GONIADA BRUNNEA	.5	1		.141	.2820		1				1		
		LUMBRINERIS SP.	.5		1	.008		.0160							
		TAUBERIA GRACILIS	5.5	1	10	.002	.0004	.0030	1			1			
		PARAPRIONOSPIO PINNATA	1.0	1	1	.023	.0440	.0020							
		THARYX SP.	1.5		3	.004		.0080							
		HETEROMASTUS FILOBRANCHUS	1.0		2	.037		.0750	1					1	
	SUM		18.0	7	29	.385	.3724	.3570							
	GASTROPODA	VITRELLA SP.	.5		1	.010		.0210							21.9
		CYLICHNA SP.	.5	1		.006	.0120								
	SUM		1.0	1	1	.016	.0120	.0210							
	BIVALVIA	NUCULA TENUIS	1.0		2	.010		.0200							21.9
		AXINOPSIDA SERRICATA	16.5	8	25	.153	.0510	.2560	1		1	1	1	1	
		MYSELLA TUMIDA	1.0		2	.000		.0010							

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

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                              BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                                     COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TAXONOMIC GROUP  TAXON                      MEAN REP 1 REP 2   MEAN    REP 1    REP 2  TOTAL MEAN REP1 REP2 W1 W2 DPTH
TION                                            COUNT COUNT COUNT  WEIGHT   WEIGHT   WEIGHT   NSP  NSP  NSP  NSP        (M)
                                              #/0.1M2             G/0.1M2  (SEE B)           SEE C
                                                                                                                    21.9
                                                 18.5     8    29    .164    .0510    .2770
     SUM
                                                   .5           1    .000             .0004
     OSTRACODA        MYODOCOPA                                                                                     21.9
                                                   .5           1    .000             .0004
     SUM                                                                                                            21.9
                                                 40.9    17    60    .570    .4444    .6954    17   11    8   14
                                                                                                             1  1
TOT:
                                                  1.0     1     1   7.612   8.1250   7.1000     1
L07  CNIDARIA         PACHYCERIANTHUS FIMBRIATA                                                                     27.4
                                                  1.0     1     1   7.612   8.1250   7.1000
     SUM
                                                  1.5     1     2   2.186   3.3400   1.0320     1                1
     NEMERTEA         NEMERTEA                                                                                      27.4
                                                  1.5     1     2   2.186   3.3400   1.0320
     SUM
     POLYCHAETA       PHOLOE MINUTA                .5           1    .000             .0010
                      ANAITIDES MUCOSA             .5     1          .221    .4420
                      NEREIS PROCERA               .5           1    .002             .0050
                      NEPHTYS LONGOSETOSA          .5           1    .000             .0004
                      NEPHTYS FERRUGINEA           .5     1          .010    .0200
                      GLYCERA CAPITATA            1.0     1     1    .160    .2910    .0290
                      GLYCINDE ARMIGERA            .5           1    .048             .0970
                      GONIADA BRUNNEA             2.5     2     3    .475    .4030    .5480
                      LUMBRINERIS SP.             1.5           3    .007             .0140
                      ARICIDEA LOPEZI              .5           1    .001             .0020
                      TAUBERIA GRACILIS          11.5    10    13    .002    .0020    .0020
                      LAONICE CIRRATA              .5           1    .003             .0060
                      PRIONOSPIO CIRRIFERA        1.5     3          .000    .0004
                      SPIOPHANES BERKELEYORUM      .5     1          .001    .0020
                      PARAPRIONOSPIO PINNATA      2.5     2     3    .111    .1320    .0910
                      CIRRATULUS CIRRATUS          .5     1          .001    .0020
                      THARYX SP.                 18.0    10    26    .045    .0290    .0620
                      COSSURA SOYERI              1.0           2    .000             .0004
                      STERNASPIS SCUTATA           .5           1    .056             .1120
                      HETEROMASTUS FILOBRANCHUS    .5     1          .012    .0240
                      MEDIOMASTUS CALIFORNIENSI    .5           1    .000             .0004
                      AMPHICTEIS SCAPHOBRANCHIA    .5           1    .086             .1730
                                                                                                                    27.4
                                                 46.5    33    60   1.245   1.3474   1.1432
      SUM
                                                  2.0     2     2    .175    .0950    .2560
      BIVALVIA        ACILA CASTRENSIS
                                                          A: E05 AND E10 NOT PROCESSED.
                                                          B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                                                             TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                                          C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                                             MEAN: MEAN # OF TAXA IN 2 REPLICATES.
                                                             DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
                                                             DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                                             OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER
                                                             "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
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8(27)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
		NUCULA TENUIS	8.0	2	14	.224	.0550	.3940							
		NUCULANA MINUTA	1.5	1	2	.087	.0310	.1440							
		YOLDIA SCISSURATA	4.0		8	.063		.1250							
		AXINOPSIDA SERRICATA	113.0	67	159	1.250	.9140	1.5860	1		1	1		1	
		MYSELLA TUMIDA	7.0	3	11	.015	.0050	.0260							
		MACOMA SP.	2.5	1	4	.002	.0010	.0040							
		SAXIDOMUS GIGANTEUS	1.5		3	.212		.4240							
		PSEPHIDIA LORDI	1.0	2		.009	.0180								
		PANDORA FILOSA	1.5		3	.029		.0580							
		LYONSIA CALIFORNICA	.5	1		.039	.0790								
		PULSELLUM SALISHORUM	.5		1	.004		.0080							
	SUM		143.0	79	207	2.111	1.1980	3.0250							27.4
	CUMACEA	EUDORELLA SP.	25.5	13	38	.022	.0110	.0330	1			1			
	SUM		25.5	13	38	.022	.0110	.0330							27.4
	AMPHIPODA	HETEROPHOXUS OCULATUS	6.0	5	7	.022	.0200	.0250							
	SUM		6.0	5	7	.022	.0200	.0250							27.4
	DECAPODA	PINNIXA OCCIDENTALIS	1.0	2		.005	.0110								
	SUM		1.0	2		.005	.0110								27.4
	PRIAPULIDA	PRIAPULUS CAUDATUS	.5		1	.048		.0970							
	SUM		.5		1	.048		.0970							27.4
	OPHIUROIDEA	AMPHIURIDAE	8.5	5	12	.110	.0770	.1440							
	SUM		8.5	5	12	.110	.0770	.1440							27.4
	HOLOTHUROIDEA	PENTAMERA POPULIFERA	11.0		22	.752		1.5050	1					1	
	SUM		11.0		22	.752		1.5050							27.4
TOT:			188.7	139	350	14.117	14.1294	14.1042	42	29	25	33			27.4
L08	NEMERTEA	NEMERTEA	.5	1		.026	.0520								

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

8(30

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	SUM		.5	1		.026	.0520								29.2
	POLYCHAETA	TENONIA KITSAPENSIS	.5	1		.000	.0010								
		GYPTIS BREVIPALPA	.5		1	.000		.0010							
		OPHIODROMUS PUGETTENSIS	.5	1		.000	.0004								
		NEPHTYS LONGOSETOSA	1.5	3		.004	.0080								
		HEMIPODUS BOREALIS	2.0	2	2	.204	.2170	.1920							
		GLYCINDE PICTA	1.5	1	2	.217	.1650	.2700							
		LUMBRINERIS SP.	.5	1		.004	.0080								
		ARICIDEA LOPEZI	.5	1		.000	.0004								
		TAUBERIA GRACILIS	6.0	6	6	.003	.0040	.0020							
		LAONICE CIRRATA	1.0	1	1	.600	.1820	1.0190							
		PRIONOSPIO STEENSTRUPI	.5	1		.000	.0004								
		PARAPRIONOSPIO PINNATA	2.0	2	2	.155	.2790	.0320							
		THARYX SP.	1.0	1	1	.001	.0020	.0010							
		STERNASPIS SCUTATA	1.0	2		.178	.3570								
		MYXICOLA AESTHETICA	.5	1		.149	.2990								
	SUM		19.5	24	15	1.520	1.5232	1.5170							29.2
	GASTROPODA	MITRELLA SP.	1.5		3	.274		.5480							
	SUM		1.5		3	.274		.5480							29.2
	BIVALVIA	NUCULA TENUIS	4.0	3	5	.036	.0510	.0220							
		NUCULANA MINUTA	3.0		6	.172		.3440							
		YOLDIA SCISSURATA	1.0	1	1	.403	.5930	.2140							
		AXINOPSIDA SERRICATA	77.5	40	115	1.405	.8710	1.9390	1		1	1	1	1	
		MYSELLA TUMIDA	.5	1		.000	.0004								
		MACOMA SP.	2.0		4	.012		.0240							
		SAXIDOMUS GIGANTEUS	2.0	2	2	4.247	2.9270	5.5680	1				1	1	
		PSEPHIDIA LORDI	1.0		2	.003		.0060							
	SUM		91.0	47	135	6.280	4.4424	8.1170							29.2
	CUMACEA	EUDORELLA SP.	2.5	3	2	.001	.0010	.0010							
	SUM		2.5	3	2	.001	.0010	.0010							29.2
	AMPHIPODA	HETEROPHOXUS OCULATUS	4.5	4	5	.012	.0160	.0090							
	SUM		4.5	4	5	.012	.0160	.0090							29.2

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
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DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

(31)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	OTHER ARTHROPODA	NEOMYSIS INTEGER	.5	1		.017	.0340								
	SUM		.5	1		.017	.0340								
	OPHIUROIDEA	AMPHIURIDAE	3.0	2	4	.075	.0310	.1190							29.2
	SUM		3.0	2	4	.075	.0310	.1190							
TOT:			96.6	92	164	8.205	6.0556	10.3110	29	21	24	18			29.2
L09	POLYCHAETA	HARMOTHOE LUNULATA	.5	1		.005	.0110								29.2
		PHOLOE MINUTA	.5	1		.001	.0020								
		GYPTIS BREVIPALPA	.5		1	.000		.0010							
		OPHIODROMUS PUGETTENSIS	1.0	2		.001	.0030								
		NEPHTYS LONGOSETOSA	.5		1	.000		.0010							
		HEMIPODUS BOREALIS	1.0	1	1	.163	.0160	.3100	1					1	
		GONIADA BRUNNEA	1.0		2	.141		.2830	1					1	
		DORVILLEA SP.	1.0	2		.006	.0130								
		TAUBERIA GRACILIS	3.0	3	3	.001	.0010	.0010							
		LAONICE CIRRATA	.5	1		.167	.3340		1				1		
		THARYX SP.	.5		1	.002		.0050							
		PISTA CRISTATA	1.0	2		.572	1.1440		1				1		
	SUM		11.0	13	9	1.062	1.5240	.6010							
	GASTROPODA	CYLICHNA SP.	.5		1	.001		.0020							27.4
	SUM		.5		1	.001		.0020							
	BIVALVIA	ACILA CASTRENSIS	.5		1	.001		.0030							27.4
		NUCULA TENUIS	2.0		4	.018		.0360	1			1			
		NUCULANA MINUTA	.5		1	.036		.0720							
		AXINOPSIDA SERRICATA	11.5	13	10	.115	.1250	.1050	1		1	1		1	
		MYSELLA TUMIDA	5.5	7	4	.011	.0190	.0030	1		1	1			
		TRANSENNELLA TANTILLA	.5		1	.001		.0020							
		SAXIDOMUS GIGANTEUS	.5	1		.752	1.5040		1				1		
		PSEPHIDIA LORDI	1.5	1	2	.006	.0030	.0090							
	SUM		22.5	22	23	.940	1.6510	.2300							
	OSTRACODA	MYODOCOPA	1.0	1	1	.001	.0010	.0010							27.4

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

8(37)

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                      BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                            COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TAXONOMIC GROUP  TAXON                        MEAN  REP 1 REP 2   MEAN    REP 1    REP 2  TOTAL MEAN REP1 REP2 W1 W2 DPTH
TION                                              COUNT COUNT COUNT  WEIGHT   WEIGHT   WEIGHT   NSP  NSP  NSP  NSP        (M)
                                                 #/0.1M2             G/0.1M2  (SEE B)          SEE C

     SUM                                           1.0     1     1    .001    .0010    .0010                                27.4
     CUMACEA          EUDORELLA SP.                 .5     1          .000    .0004
     SUM                                            .5     1          .000    .0004                                         27.4
     AMPHIPODA        HETEROPHOXUS OCULATUS        1.5     2     1    .001    .0010    .0010
     SUM                                           1.5     2     1    .001    .0010    .0010                                27.4
     DECAPODA         PINNIXA OCCIDENTALIS         2.0     2     2    .026    .0220    .0300
     SUM                                           2.0     2     2    .026    .0220    .0300                                27.4
     OPHIUROIDEA      AMPHIURIDAE                  2.0     1     3    .067    .0030    .1320     1                      1
     SUM                                           2.0     1     3    .067    .0030    .1320                                27.4
TOT:                                              33.7    42    40   2.100   3.2024    .9970    26   18   17   18          27.4
L10  CNIDARIA         PACHYCERIANTHUS FIMBRIATA    1.5     1     2    .703    .0280   1.3780
     SUM                                           1.5     1     2    .703    .0280   1.3780                                27.4
     NEMERTEA         CEREBRATULUS SP.             1.0           2   3.821            7.6430     1                      1
     SUM                                           1.0           2   3.821            7.6430                                27.4
     POLYCHAETA       TENONIA KITSAPENSIS           .5           1    .001             .0020
                      PHOLOE MINUTA                 .5           1    .001             .0020
                      ANAITIDES MACULATA            .5     1          .344    .6880
                      NEPHTYS LONGOSETOSA           .5           1    .003             .0060
                      HEMIPODUS BOREALIS            .5     1          .002    .0040
                      GLYCINDE PICTA               1.0     2          .015    .0300
                      LUMBRINERIS SP.              5.0     7     3    .044    .0690    .0190
                      ARICIDEA LOPEZI              3.0     2     4    .006    .0020    .0100
                      TAUBERIA GRACILIS           28.0    29    27    .024    .0290    .0200     1              1
                      LAONICE CIRRATA               .5           1    .220             .4400
                      PRIONOSPIO CIRRIFERA          .5           1    .000             .0004
                      SPIOPHANES BERKELEYORUM      1.0           2    .022             .0450
                      PARAPRIONOSPIO PINNATA       4.0     2     6    .189    .0300    .3480

                                                 A: E05 AND E10 NOT PROCESSED.
                                                 B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                                                    TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                                 C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                                    MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
                                                    DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
                                                    DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                                    OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER
                                                    "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
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                          BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                               COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-  TAXONOMIC GROUP  TAXON                          MEAN  REP 1 REP 2   MEAN    REP 1    REP 2  TOTAL MEAN REP1 REP2 W1 W2 DPTH
TION                                                 COUNT  COUNT COUNT  WEIGHT   WEIGHT  WEIGHT    NSP  NSP  NSP  NSP         (M)
                                                   #/0.1M2               G/0.1M2  (SEE B)          SEE C

                       THARYX SP.                       .5            1   .001             .0020
                       CHAETOZONE SETOSA               1.0      2         .004    .0090
                       ARMANDIA BREVIS                  .5      1         .000    .0004
                       STERNASPIS SCUTATA              2.5      2     3   .437    .3130    .5620
                       HETEROMASTUS FILIFORMIS         1.0            2   .009             .0170
                       PRAXILLELLA AFFINIS              .5      1         .002    .0040
                       PECTINARIA GRANULATA            1.5      3         .001    .0020
                       TEREBELLIDES STROEMI             .5      1         .003    .0070
                                                                                                                       27.4
      SUM                                              53.5     54    53  1.330   1.1874   1.4734

      GASTROPODA       ALVINIA SP.                     1.5      3         .003    .0060
                       EPITONIUM TINCTUM                .5            1   .005             .0110
                       ODOSTOMIA SP.                   2.0      4         .002    .0050
                       TURBONILLA SP.                   .5      1         .028    .0560
                       CYLICHNA SP.                     .5      1         .000    .0004
                                                                                                                       27.4
      SUM                                               5.0      9     1  .039    .0674    .0110

      BIVALVIA         ACILA CASTRENSIS               23.5     23    24  2.834   1.5480   4.1210    1            1     1
                       NUCULA TENUIS                  12.0     18     6   .467    .5360    .3990
                       NUCULANA MINUTA                 6.0      8     4   .344    .5180    .1700
                       YOLDIA SCISSURATA               4.0      4     4   .093    .0600    .1270
                       AXINOPSIDA SERRICATA           69.5    119    20   .820   1.4230    .2170    1       1
                       MYSELLA TUMIDA                  3.5      7         .004    .0080
                       MACOMA SP.                      7.0     12     2   .047    .0630    .0320
                       SAXIDOMUS GIGANTEUS              .5      1         .009    .0160
                       PSEPHIDIA LORDI                 4.0      5     3   .030    .0190    .0410
                       PANDORA FILOSA                   .5            1   .035             .0700
                       PULSELLUM SALISHORUM            6.0     12         .034    .0690
                                                                                                                       27.4
      SUM                                             136.5    209    64  4.719   4.2600   5.1770

      OSTRACODA        MYODOCOPA                       6.0     12         .003    .0070
                                                                                                                       27.4
      SUM                                               6.0     12         .003    .0070

      CUMACEA          EUDORELLA SP.                  27.5     35    20   .025    .0380    .0130
                                                                                                                       27.4
      SUM                                              27.5     35    20   .025    .0380    .0130

      AMPHIPODA        HETEROPHOXUS OCULATUS          13.5      5    22   .026    .0030    .0500

                                                          A: E05 AND E10 NOT PROCESSED.
                                                          B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                                                             TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                                          C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                                             MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
                                                             DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
                                                             DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                                             OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER
                                                             "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
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9(34)

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STATION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	SUM		13.5	5	22	.026	.0030	.0500							27.4
	DECAPODA	BRACHYURA (JUVENILES)	1.0	2		.000	.0010								
	SUM		1.0	2		.000	.0010								27.4
	OPHIUROIDEA	AMPHIURIDAE	13.0	19	7	.250	.2690	.2320							
	SUM		13.0	19	7	.250	.2690	.2320							27.4
	HOLOTHUROIDEA	PENTAMERA POPULIFERA	362.0	659	65	15.019	11.3300	18.7090	1		1	1	1	1	
	SUM		362.0	659	65	15.019	11.3300	18.7090							27.4
TOT:			131.7	1005	236	25.939	17.1908	34.6864	45	31	34	28			27.4
L11	CNIDARIA	PACHYCERIANTHUS FIMBRIATA	1.5	1	2	2.584	.6820	4.4860	1					1	
	SUM		1.5	1	2	2.584	.6820	4.4860							25.6
	NEMERTEA	NEMERTEA	.5	1		.003	.0070								
	SUM		.5	1		.003	.0070								25.6
	POLYCHAETA	EUNOE UNISERIATA	.5		1	.011		.0220							
		GYPTIS BREVIPALPA	.5	1		.000	.0010								
		NEREIS PROCERA	.5	1		.040	.0800								
		NEPHTYS LONGOSETOSA	1.0	2		.003	.0070								
		HEMIPODUS BOREALIS	.5	1		.138	.2770								
		GLYCINDE PICTA	2.0	1	3	.036	.0190	.0530							
		LUMBRINERIS SP.	1.0		2	.031		.0630							
		DORVILLEA ANNULATA	.5		1	.014		.0280							
		ARICIDEA LOPEZI	6.0	6	6	.004	.0030	.0050							
		TAUBERIA GRACILIS	30.5	28	33	.017	.0150	.0190							
		PRIONOSPIO CIRRIFERA	1.0	1	1	.000	.0004	.0004	1			1			
		SPIOPHANES SP.	1.0	2		.001	.0030								
		PARAPRIONOSPIO PINNATA	4.0	5	3	.107	.0120	.2030							
		CIRRATULUS CIRRATUS	.5	1		.002	.0050								
		THARYX SP.	.5		1	.001		.0030							
		COSSURA SOYERI	.5		1	.000		.0004							
		STERNASPIS SCUTATA	9.0	12	6	1.718	2.0180	1.4180	1					1	

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                    BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                            COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA- TAXONOMIC GROUP  TAXON                          MEAN REP 1 REP 2    MEAN    REP 1    REP 2 TOTAL MEAN REP1 REP2 W1 W2 DPTH
TION                                                COUNT COUNT COUNT  WEIGHT   WEIGHT   WEIGHT   NSP NSP   NSP  NSP         (M)
                                                   #/0.1M2              G/0.1M2 (SEE B)           SEE C

                      HETEROMASTUS FILOBRANCHUS       1.0           2    .002            .0040
                      MEDIOMASTUS CALIFORNIENSI        .5     1          .001    .0030
                      PRAXILLELLA AFFINIS             3.0     6          .031    .0620
                      EUCLYMENINAE                     .5           1    .003            .0070
                      AMPHICTEIS SCAPHOBRANCHIA        .5     1          .038    .0770
                      MELINNA ELISABETHAE              .5           1    .000            .0010

     SUM                                             65.5    69    62   2.205   2.5824   1.8268                               25.6

     GASTROPODA       ALVINIA SP.                      .5     1          .000    .0010
                      EPITONIUM TINCTUM                .5           1    .032            .0640
                      ODOSTOMIA SP.                    .5     1          .003    .0060
                      CYLICHNA SP.                     .5     1          .012    .0250

     SUM                                              2.0     3     1    .048    .0320    .0640                               25.6

     BIVALVIA         ACILA CASTRENSIS               47.0    82    12   7.812  14.2160   1.4090     1         1        1  1
                      NUCULA TENUIS                  17.0    20    14    .393    .3300    .4560
                      NUCULANA MINUTA                 7.5    10     5    .270    .5200    .0210
                      YOLDIA SCISSURATA               1.5     2     1    .856    .1130   1.6000     1                     1
                      YOLDIA THRACIAEFORMIS            .5     1          .694   1.3890
                      MUSCULUS LAEVIGATUS              .5     1          .041    .0830
                      AXINOPSIDA SERRICATA           17.5    31     4    .097    .1790    .0150     1         1
                      MYSELLA TUMIDA                   .5     1          .001    .0020
                      MACOMA SP.                      5.0     2     8    .009    .0010    .0160
                      TELLINA CARPENTERI               .5           1    .006             .0120
                      SAXIDOMUS GIGANTEUS             1.5     2     1    .090    .1390    .0410
                      PSEPHIDIA LORDI                 6.5    10     3    .116    .1520    .0800
                      PANDORA FILOSA                   .5           1    .026             .0520
                      CARDIOMYA OLDROYDI               .5           1    .000             .0010
                      PULSELLUM SALISHORUM            6.0    11     1    .038    .0730    .0040

     SUM                                            112.5   173    52  10.452  17.1970   3.7070                               25.6

     OSTRACODA        MYODOCOPA                       4.5     2     7    .001    .0004    .0020

     SUM                                              4.5     2     7    .001    .0004    .0020                               25.6

     CUMACEA          EUDORELLA SP.                  13.5    16    11    .011    .0160    .0060

     SUM                                             13.5    16    11    .011    .0160    .0060                               25.6

                                                A: E05 AND E10 NOT PROCESSED.
                                                B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                                                   TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                                C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                                   MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
                                                   DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
                                                   DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                                   OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER
                                                   "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
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BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
		HETEROMASTUS FILOBRANCHUS	1.0		2	.002		.0040							
		MEDIOMASTUS CALIFORNIENSI	.5	1		.001	.0030								
		PRAXILLELLA AFFINIS	3.0	6		.031	.0620								
		EUCLYMENINAE	.5		1	.003		.0070							
		AMPHICTEIS SCAPHOBRANCHIA	.5	1		.038	.0770								
		MELINNA ELISABETHAE	.5		1	.000		.0010							
	SUM		65.5	69	62	2.205	2.5824	1.8268							25.6
	GASTROPODA	ALVINIA SP.	.5	1		.000	.0010								
		EPITONIUM TINCTUM	.5		1	.032		.0640							
		ODOSTOMIA SP.	.5	1		.003	.0060								
		CYLICHNA SP.	.5	1		.012	.0250								
	SUM		2.0	3	1	.048	.0320	.0640							25.6
	BIVALVIA	ACILA CASTRENSIS	47.0	82	12	7.812	14.2160	1.4090	1		1		1	1	
		NUCULA TENUIS	17.0	20	14	.393	.3300	.4560							
		NUCULANA MINUTA	7.5	10	5	.270	.5200	.0210							
		YOLDIA SCISSURATA	1.5	2	1	.856	.1130	1.6000	1					1	
		YOLDIA THRACIAEFORMIS	.5	1		.694	1.3890								
		MUSCULUS LAEVIGATUS	.5	1		.041	.0830								
		AXINOPSIDA SERRICATA	17.5	31	4	.097	.1790	.0150	1		1				
		MYSELLA TUMIDA	.5	1		.001	.0020								
		MACOMA SP.	5.0	2	8	.009	.0010	.0160							
		TELLINA CARPENTERI	.5		1	.006		.0120							
		SAXIDOMUS GIGANTEUS	1.5	2	1	.090	.1350	.0410							
		PSEPHIDIA LORDI	6.5	10	3	.116	.1520	.0800							
		PANDORA FILOSA	.5		1	.026		.0520							
		CARDIOMYA OLDROYDI	.5		1	.000		.0010							
		PULSELLUM SALISHORUM	6.0	11	1	.038	.0730	.0040							
	SUM		112.5	173	52	10.452	17.1970	3.7070							25.6
	OSTRACODA	MYODOCOPA	4.5	2	7	.001	.0004	.0020							
	SUM		4.5	2	7	.001	.0004	.0020							25.6
	CUMACEA	EUDORELLA SP.	13.5	16	11	.011	.0160	.0060							
	SUM		13.5	16	11	.011	.0160	.0060							25.6

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

3[illegible]

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STATION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	AMPHIPODA	PROTOMEDEIA SP.	1.5	3		.001	.0030								
		HETEROPHOXUS OCULATUS	9.5	8	11	.013	.0100	.0160							
	SUM		11.0	11	11	.014	.0130	.0160							
	DECAPODA	PINNIXA OCCIDENTALIS	.5		1	.001		.0030							25.6
	SUM		.5		1	.001		.0030							
	OPHIUROIDEA	AMPHIURIDAE	22.5	22	23	.457	.5340	.3810	1			1			25.6
	SUM		22.5	22	23	.457	.5340	.3810							
TOT:			97.8	298	170	15.778	21.0438	10.4518	50	35	37	33			25.6
L12	CNIDARIA	PACHYCERIANTHUS FIMBRIATA	.5	1		1.701	3.4030		1				1		25.6
	SUM		.5	1		1.701	3.4030								
	NEMERTEA	NEMERTEA	1.0	1	1	.180	.3600	.0004							23.9
		CEREBRATULUS SP.	.5		1	.293		.5870							
	SUM		1.5	1	2	.474	.3600	.5874							
	POLYCHAETA	EUNOE UNISERIATA	.5	1		.022	.0450								23.9
		PHOLOE MINUTA	.5		1	.001		.0030							
		NEPHTYS LONGOSETOSA	1.0	2		.134	.2680								
		NEPHTYS FERRUGINEA	.5	1		.006	.0120								
		GLYCINDE PICTA	.5		1	.012		.0250							
		GONIADA BRUNNEA	.5	1		.513	1.0270								
		LUMBRINERIS SP.	1.0	2		1.033	2.0660								
		DORVILLEA ANNULATA	.5		1	.003		.0070							
		ARICIDEA LOPEZI	.5		1	.000		.0004							
		TAUBERIA GRACILIS	15.0	13	17	.004	.0040	.0050							
		PRIONOSPIO CIRRIFERA	1.0	1	1	.000	.0004	.0004							
		SPIOPHANES BERKELEYORUM	.5		1	.002		.0040							
		PARAPRIONOSPIO PINNATA	2.5	4	1	.147	.2280	.0670							
		ARMANDIA BREVIS	.5		1	.001		.0020							
		TRAVISIA PUPA	3.0	1	5	4.306	2.0920	6.5210	1					1	
		STERNASPIS SCUTATA	1.0		2	.112		.2240							
		HETEROMASTUS FILOBRANCHUS	.5	1		.056	.1130								

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STATION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	SUM		29.5	27	32	6.357	5.8554	6.8588							23.8
	GASTROPODA	ODOSTOMIA SP.	.5		1	.000		.0010							
		CYLICHNA SP.	2.0	1	3	.099	.0200	.1790							
	SUM		2.5	1	4	.100	.0200	.1800							23.8
	BIVALVIA	ACILA CASTRENSIS	3.0	4	2	.106	.2030	.0090							
		NUCULA TENUIS	6.5	7	6	.097	.1730	.0210							
		NUCULANA MINUTA	1.0	1	1	.017	.0220	.0130							
		YOLDIA SCISSURATA	.5	1		.078	.1560								
		AXINOPSIDA SERRICATA	42.5	26	59	.473	.2930	.6530	1		1	1			
		MYSELLA TUMIDA	1.0	2		.001	.0030								
		SAXIDOMUS GIGANTEUS	1.5		3	.075		.1500							
		PULSELLUM SALISHORUM	.5	1		.002	.0040								
	SUM		56.5	42	71	.850	.8540	.8460							23.8
	OSTRACODA	MYODOCOPA	25.0	17	33	.017	.0140	.0200	1		1	1			
	SUM		25.0	17	33	.017	.0140	.0200							23.8
	CUMACEA	EUDORELLA SP.	16.5	7	26	.011	.0050	.0170	1			1			
	SUM		16.5	7	26	.011	.0050	.0170							23.8
	AMPHIPODA	HETEROPHOXUS OCULATUS	7.5	7	8	.012	.0120	.0130							
	SUM		7.5	7	8	.012	.0120	.0130							23.8
	DECAPODA	PINNIXA OCCIDENTALIS	1.5		3	.005		.0100							
	SUM		1.5		3	.005		.0100							23.8
	OPHIUROIDEA	AMPHIURIDAE	64.5	54	75	.968	.7090	1.2270	1		1	1		1	
	SUM		64.5	54	75	.968	.7090	1.2270							23.8
	HOLOTHUROIDEA	MOLPADIA INTERMEDIA	.5	1		8.156	16.3130		1				1		
	SUM		.5	1		8.156	16.3130								23.8

A: E05 AND E10 NOT PROCESSED.
B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
MEAN: MEAN # OF TAXA IN 2 REPLICATES.
DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".

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                        BENTHIC INVERTEBRATE TAXA IN BELLINGHAM BAY BY STATION (SEE A)
                              COUNT, WEIGHT AND NUMBER OF TAXA PER 0.1M2

STA-  TAXONOMIC GROUP   TAXON
TION                                         MEAN REP 1 REP 2    MEAN    REP 1    REP 2  TOTAL MEAN REP1 REP2 W1 W2 DPTH
                                            COUNT COUNT COUNT  WEIGHT   WEIGHT   WEIGHT    NSP  NSP  NSP  NSP       (M)
                                           #/0.1M2            G/0.1M2  (SEE B)          SEE C

TOT:                                        138.5   158   254  18.652  27.5454   9.7592     36   25   25   25       23.8




                                                            A: E05 AND E10 NOT PROCESSED.
                                                            B: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                                                               TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                                            C: TOTAL:TOTAL # OF TAXA IN 2 REPLICATES.
                                                               MEAN: MEAN  # OF TAXA IN 2 REPLICATES.
                                                               DOMINANT TAXA ARE FLAGGED WITH A "1" IN THE "TOTAL NSP" COLUMN. A
                                                               DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                                               OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE LISTED UNDER
                                                               "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
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APPENDIX 6

Dominant species of infaunal macrobenthos at 20 stations in Bellingham Bay and two stations in Samish Bay sampled by 0.1 m^2 Van Veen grab in May and October, 1983.

[illegible] (1 of 3) Appendix D

DOMINANT INVERTEBRATE TAXA IN BELLINGHAM BAY BENTHOS
MEAN COUNT AND WET WEIGHT PER 0.1M2 BY STATION (SEE A,D)

STATION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
E01	POLYCHAETA	OWENIA FUSIFORMIS	1039.0	955	1191	7.271	6.6330	7.9050	1		1	1	1	1	5.7
		TEREBELLIDES STROEMI	46.5	53	40	3.123	3.6700	2.5760	1				1	1	5.7
	SUM		1084.5	948	1221	10.394	10.3030	10.4850							5.7
DOM:			1084.5	948	1221	10.394	10.3030	10.4850	2		1	1	2	2	5.7
TOT:			2016.5	1821	2212	15.104	14.0204	16.1870	59	50	46	54			5.7
E02	POLYCHAETA	GLYCINDE PICTA	46.5	53	40	.934	1.0700	.7980	1				1		7.9
		THARYX SP.	657.0	899	415	3.871	4.4590	3.2850	1		1	1	1	1	7.9
	SUM		703.5	952	455	4.805	5.5290	4.0830							7.9
	BIVALVIA	MACOMA SP.	12.0	12	12	1.036	1.1440	.9290	1				1	1	7.9
		MACOMA NASUTA	2.5	3	2	1.306	1.9810	.6320	1				1		7.9
	SUM		14.5	15	14	2.343	3.1250	1.5610							7.9
	AMPHIPODA	PROTOMEDEIA SP.	221.5	235	208	.693	.7380	.6480	1		1	1			7.9
	SUM		221.5	235	208	.693	.7380	.6480							7.9
DOM:			935.5	1202	677	7.841	9.3910	6.2920	5		2	2	4	2	7.9
TOT:			1241.0	1504	978	9.250	10.4638	8.0364	45	36	36	35			7.9
E03	POLYCHAETA	DORVILLEA ANNULATA	508.5	541	476	1.021	1.1150	.9270	1		1	1			4.5
		THARYX SP.	1036.0	976	1096	1.805	1.9390	1.6720	1		1	1	1		4.5
	SUM		1544.5	1517	1572	2.826	3.0540	2.5990							4.5
	BIVALVIA	MACOMA SP.	12.0	17	7	.825	1.5700	.0810	1				1		4.5
		MACOMA NASUTA	1.5	1	2	4.542	4.9240	4.1610	1				1	1	4.5
	SUM		13.5	18	9	5.368	6.4940	4.2420							4.5
	DECAPODA	CALLIANASSA CALIFORNIENSI	1.0	1	1	12.043	3.8740	20.2120	1				1	1	4.5
	SUM		1.0	1	1	12.043	3.8740	20.2120							4.5
DOM:			1559.0	1536	1582	20.237	13.4220	27.0530	5		2	2	4	2	4.5
TOT:			1831.5	1859	1804	22.589	15.2606	29.9154	40	33	33	33			4.5
E04	POLYCHAETA	THARYX SP.	408.0	501	315	1.743	1.9130	1.5740	1		1	1	1	1	11.5

A: E05 AND E10 NOT PROCESSED.
B: A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE FLAGGED UNDER "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
D: STATION TOTALS REPORTED FOR COMPARISON.

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                                       DOMINANT INVERTEBRATE TAXA IN BELLINGHAM BAY BENTHOS
                                    MEAN COUNT AND WET WEIGHT PER 0.1M2 BY STATION (SEE A,D)
STA-  TAXONOMIC GROUP  TAXON
TION
                                                    MEAN REP 1 REP 2     MEAN     REP 1    REF 2  TOTAL MEAN REP1 REP2 W1 W2 DPTH
                                                   COUNT COUNT COUNT   WEIGHT    WEIGHT   WEIGHT    NSP  NSP  NSP  NSP         (M)
                                                 #/0.1M2               G/0.1M2  (SEE B)          SEE C
      SUM
                                                   408.0   501   315    1.743    1.9130   1.5740
      BIVALVIA           MACOMA SP.                                                                                         11.5
                                                    13.0    15    11    3.860    7.4910    .2300     1
                         MACOMA NASUTA               2.5           5    2.571              5.1430     1                  1    11.5
      SUM                                                                                                                 1 11.5
                                                    15.5    15    16    6.432    7.4910   5.3730
DOM:
TOT:                                                                                                                        11.5
                                                   422.5   516   331    8.175    9.4040   6.9470     3          1    1  2  2 11.5
E06   POLYCHAETA                                   468.0   564   372    8.680    9.9444   7.4158    20   15    16   14       11.5
                         NEREIS BRANDTI               .5     1          3.184    6.3680
                         GLYCINDE PICTA             55.5    66    45     .694     .6400             1                  1    12.3
                         THARYX SP.               1466.0  1270  1662    3.281    2.8390    .7490     1                    1 12.3
      SUM                                                                                  3.7240    1          1    1  1  1 12.3
                                                  1522.0  1337  1707    7.160    5.8470   4.4730
DOM:
TOT:                                                                                                                        12.3
                                                  1522.0  1337  1707    7.160    5.8470   4.4730     3          1    1  2  2 12.3
E07   POLYCHAETA                                  1951.0  1725  2177    8.717   11.3166   6.1176    54   43    41   44       12.3
                         THARYX SP.                153.5   233    74     .961    1.6030    .3200     1          1    1  1  1 11.3
      SUM
                                                   153.5   233    74     .961    1.6030    .3200
      BIVALVIA           CLINOCARDIUM SP.                                                                                   11.3
                                                      .5           1     .041               .0830
                         MACOMA SP.                  2.0     3     1     .183     .3550     .0120     1                    1 11.3
      SUM                                                                                            1                 1    11.3
                                                     2.5     3     2     .225     .3550     .0950
      DECAPODA           CRANGON FRANCISCORUM                                                                               11.3
      SUM                                             .5     1           .297     .5940
                                                                                                     1                 1    11.3
                                                      .5     1           .297     .5540
DOM:
TOT:                                                                                                                        11.3
                                                   156.5   237    76    1.483    2.5520    .4150     4          1    1  3  2 11.3
E08   POLYCHAETA         NEPHTYS FERRUGINEA        162.5   245    80    1.569    2.7150    .4230    10    7     7    6       11.3
                         THARYX SP.                   .5           1    2.311              4.6220
                                                  1595.0  1920  1270    2.400    2.4620   2.3280     1                    1 13.6
      SUM                                                                                            1          1    1  1  1 13.6
                                                  1595.5  1920  1271    4.711    2.4620   6.9600
      BIVALVIA           SAXIDOMUS GIGANTEUS                                                                                13.6
                         MYA ARENARIA                 .5           1     .921              1.8420
      SUM                                            4.5     4     5     .922     .7790    1.0660     1                    1 13.6
                                                                                                     1                 1    13.6
                                                     5.0     4     6    1.843     .7790    2.9080
                                                 A: E05 AND E10 NOT PROCESSED.                                              13.6
                                                 B: A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                                    OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE FLAGGED UNDER
                                                    "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
                                                 C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                                                    TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                                 D: STATION TOTALS REPORTED FOR COMPARISON.
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DOMINANT INVERTEBRATE TAXA IN BELLINGHAM BAY BENTHOS
MEAN COUNT AND WET WEIGHT PER 0.1M2 BY STATION (SEE A,D)

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	OPHIUROIDEA	AMPHIURIDAE	10.5	20	1	.455	.9070	.0040	1				1		13.6
	SUM		10.5	20	1	.455	.9070	.0040							13.6
DOM:			1611.0	1944	1278	7.010	4.1480	9.6720	5		1	1	3	3	13.6
TOT:			1972.0	2459	1485	8.228	5.5564	10.9000	56	43	45	40			13.6
E09	POLYCHAETA	GLYCINDE PICTA	25.0	25	25	.563	.6770	.4490	1		1		1	1	13.6
		HETEROMASTUS FILOBRANCHUS	1.5	1	2	.353	.6910	.0150	1				1		13.6
		AMPHICTEIS SCAPHOBRANCHIA	1.0		2	.279		.5580	1					1	13.6
	SUM		27.5	26	29	1.195	1.3680	1.0220							13.6
	BIVALVIA	AXINOPSIDA SERRICATA	52.5	25	80	.376	.2470	.5050	1		1	1		1	13.6
		MACOMA NASUTA	.5	1		1.213	2.4270		1				1		13.6
		PSEPHIDIA LORDI	30.0	17	43	.242	.1780	.3070	1			1			13.6
	SUM		83.0	43	123	1.832	2.8520	.8120							13.6
	CUMACEA	EUDORELLA SP.	59.0	47	71	.038	.0310	.0460	1		1	1			13.6
	SUM		59.0	47	71	.039	.0310	.0460							13.6
DOM:			169.5	116	223	3.065	4.2510	1.8800	7		3	3	3	3	13.6
TOT:			271.5	190	353	3.916	4.5898	3.2420	47	36	31	40			13.6
E11	BIVALVIA	YOLDIA SCISSURATA	2.0	3	1	1.148	2.2450	.0520	1				1		14.8
		SOLEN SICARIUS	.5		1	4.590		9.1800	1					1	14.8
	SUM		2.5	3	2	5.738	2.2450	9.2320							14.8
	OSTRACODA	MYODOCOPA	59.0	68	50	.021	.0210	.0220	1		1				14.8
	SUM		59.0	68	50	.021	.0210	.0220							14.8
	CUMACEA	EUDORELLA SP.	65.5	121	10	.034	.0600	.0080	1		1				14.8
	SUM		65.5	121	10	.034	.0600	.0080							14.8
	DECAPODA	BRACHYURA (JUVENILES)	139.0	84	194	.119	.0690	.1700	1		1	1			14.8
	SUM		139.0	84	194	.119	.0690	.1700							14.8

A: E05 AND E10 NOT PROCESSED.
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C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
D: STATION TOTALS REPORTED FOR COMPARISON.

DOMINANT INVERTEBRATE TAXA IN BELLINGHAM BAY BENTHOS
MEAN COUNT AND WET WEIGHT PER 0.1M2 BY STATION (SEE A,D)

STATION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	OPHIUROIDEA	AMPHIURIDAE	53.0	48	58	4.859	5.2240	4.4940	1		1	1	1	1	14.8
	SUM		53.0	48	58	4.859	5.2240	4.4940							14.8
DOM:			319.0	324	314	10.772	7.6190	13.9260	6		4	2	2	2	14.8
TOT:			500.5	472	529	16.122	8.5532	23.6504	66	43	33	53			14.8
E12	POLYCHAETA	GLYCINDE PICTA	2.0	2	2	.276	.1530	.3990	1					1	16.1
	SUM		2.0	2	2	.276	.1530	.3990							16.1
	BIVALVIA	ACILA CASTRENSIS	1.5	3		.345	.6500		1				1		16.1
		MACOMA NASUTA	1.0	2		.752	1.5050		1				1		16.1
		PSEPHIDIA LORDI	28.0	33	23	.026	.0100	.0430	1		1	1			16.1
	SUM		30.5	38	23	1.124	2.2050	.0430							16.1
	CUMACEA	EUDORELLA SP.	27.0	37	17	.016	.0210	.0110	1		1	1			16.1
	SUM		27.0	37	17	.016	.0210	.0110							16.1
	DECAPODA	BRACHYURA (JUVENILES)	59.5	81	38	.047	.0710	.0230	1		1	1			16.1
	SUM		59.5	81	38	.047	.0710	.0230							16.1
	OPHIUROIDEA	AMPHIURIDAE	21.5	22	21	2.146	1.6080	2.6850	1			1	1	1	16.1
	SUM		21.5	22	21	2.146	1.6080	2.6850							16.1
DOM:			140.5	180	101	3.609	4.0580	3.1610	7		3	4	3	2	16.1
TOT:			233.0	309	157	4.054	4.5030	3.6054	38	28	33	22			16.1
L01	POLYCHAETA	THARYX SP.	809.5	836	783	1.545	1.4020	1.6890	1		1		1	1	7.6
		OWENIA FUSIFORMIS	7705.5	2826	12585	8.309	5.6560	10.9630	1		1	1	1	1	7.6
	SUM		8515.0	3662	13368	9.855	7.0580	12.6520							7.6
DOM:			8515.0	3662	13368	9.855	7.0580	12.6520	2		2	1	2	2	7.6
TOT:			8715.0	3835	13595	12.539	9.5588	15.5196	53	41	43	38			7.6
L02	POLYCHAETA	THARYX SP.	379.0	310	448	1.601	1.3030	1.9000	1		1	1			10.7
		OWENIA FUSIFORMIS	463.0	324	602	.191	.1000	.2820	1		1	1			10.7

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D: STATION TOTALS REPORTED FOR COMPARISON.

DOMINANT INVERTEBRATE TAXA IN BELLINGHAM BAY BENTHOS
MEAN COUNT AND WET WEIGHT PER 0.1M2 BY STATION (SEE A,D)

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	SUM		842.0	634	1050	1.792	1.4030	2.1820							10.7
	BIVALVIA	HUMILARIA KENNERLYI	.5	1		13.872	27.7440		1				1		10.7
	SUM		.5	1		13.872	27.7440								10.7
	HOLOTHUROIDEA	MOLPADIA INTERMEDIA	.5		1	13.276		26.5520	1					1	10.7
	SUM		.5		1	13.276		26.5520							10.7
DOM:			843.0	635	1051	28.940	29.1470	28.7340	4		2	2	1	1	10.7
TOT:			1090.5	902	1279	34.919	37.8154	32.0218	47	33	32	34			10.7
L03	POLYCHAETA	THARYX SP.	448.0	295	601	1.561	1.1350	1.5870	1		1	1		1	14.6
	SUM		448.0	295	601	1.561	1.1350	1.5870							14.6
	BIVALVIA	AXINOPSIDA SERRICATA	91.5	62	121	1.011	.7310	1.2920	1		1	1		1	14.6
	SUM		91.5	62	121	1.011	.7310	1.2920							14.6
	HOLOTHUROIDEA	MOLPADIA INTERMEDIA	.5	1		11.690	23.3800		1				1		14.6
	SUM		.5	1		11.690	23.3800								14.6
DOM:			540.0	358	722	14.262	25.2460	3.2790	3		2	2	1	2	14.6
TOT:			663.5	512	815	19.987	35.4614	4.5134	46	33	40	26			14.6
L04	CNIDARIA	PACHYCERIANTHUS FIMBRIATA	1.0	1	1	.852	.7130	.9910	1				1	1	23.8
	SUM		1.0	1	1	.852	.7130	.9910							23.8
	NEMERTEA	NEMERTEA	3.0	3	3	.279	.5260	.0320	1				1		23.8
	SUM		3.0	3	3	.279	.5260	.0320							23.8
	POLYCHAETA	TAUBERIA GRACILIS	16.5	28	5	.003	.0050	.0010	1		1				23.8
		THARYX SP.	85.5	96	75	.250	.1950	.3060	1		1	1			23.8
	SUM		102.0	124	80	.253	.2000	.3070							23.8
	BIVALVIA	AXINOPSIDA SERRICATA	32.5	34	31	.792	.9070	.6780	1		1	1	1	1	23.8
		SAXIDOMUS GIGANTEUS	1.0		2	.681		1.3630	1					1	23.8

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D: STATION TOTALS REPORTED FOR COMPARISON.

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                        DOMINANT INVERTEBRATE TAXA IN BELLINGHAM BAY BENTHOS
                      MEAN COUNT AND WET WEIGHT PER 0.1M2 BY STATION (SEE A,D)

STA- TAXONOMIC GROUP  TAXON
TION
                                                   MEAN  REP 1  REP 2     MEAN    REP 1    REP 2  TOTAL  MEAN  REP1  REP2  W1 W2  DPTH
                                                  COUNT  COUNT  COUNT   WEIGHT   WEIGHT   WEIGHT    NSP   NSP   NSP   NSP          (M)
                                                #/0.1M2               G/0.1M2  (SEE B)           SEE C
     SUM
                                                   33.5     34     33    1.474    .5070   2.0410
DOM:                                                                                                                           23.8
TOT:                                              139.5    162    117    2.858   2.3460   3.3710      6           3     2   3  3  23.8
                                                  171.0    194    148    3.719   2.8526   4.5860     34    22    25    19         23.8
L05  CNIDARIA         PACHYCERIANTHUS FIMBRIATA     1.0             2     .625            1.2510      1
     SUM                                                                                                                     1  18.3
                                                    1.0             2     .625            1.2510
     POLYCHAETA                                                                                                                 18.3
                      NEREIS PROCERA                2.5      4      1     .101    .1600    .0430      1                      1     18.3
                      GLYCINDE PICTA                4.0      2      6     .250    .1230    .3770      1                      1  1  18.3
                      THARYX SP.                   37.5     27     48     .171    .1450    .1980      1           1     1    1     18.3
                      HETEROMASTUS FILOBRANCHUS     4.0      1      7     .483    .2520    .7140      1                      1  1  18.3
     SUM
                                                   48.0     34     62    1.006    .6800   1.3320
     BIVALVIA         AXINOPSIDA SERRICATA                                                                                      18.3
                                                   15.5     20     11     .276    .3320    .2210      1           1     1    1     18.3
     SUM
                                                   15.5     20     11     .276    .3320    .2210
DOM:                                                                                                                            18.3
TOT:                                               64.5     54     75    1.908   1.0120   2.8040      6           2     2   5  3  18.3
                                                   73.5     62     85    2.074   1.0892   3.0558     18    13    12    13         18.3
L06  POLYCHAETA       NEREIS PROCERA                2.5      3      2     .024    .0320    .0160      1           1                21.9
                      GLYCINDE PICTA                3.5      1      6     .142    .0140    .2710      1                 1       1  21.9
                      GONIADA BRUNNEA                .5      1            .141    .2820               1                      1     21.9
                      TAUBERIA GRACILIS             5.5      1     10     .002    .0004    .0030      1                 1          21.9
                      HETEROMASTUS FILOBRANCHUS     1.0             2     .037             .0750      1                         1  21.9
     SUM
                                                   13.0      6     20     .347    .3284    .3650
     BIVALVIA         AXINOPSIDA SERRICATA                                                                                      21.9
                                                   16.5      8     25     .153    .0510    .2560      1           1     1    1  1  21.9
     SUM
                                                   16.5      8     25     .153    .0510    .2560
DOM:                                                                                                                            21.9
TOT:                                               29.5     14     45     .500    .3794    .6210      6           2     3   2  3  21.9
                                                   38.5     17     60     .570    .4444    .6954     17    11     8    14         21.9
L07  CNIDARIA         PACHYCERIANTHUS FIMBRIATA     1.0      1      1    7.612   8.1250   7.1000      1
     SUM                                                                                                                     1  1  27.4
                                                    1.0      1      1    7.612   8.1250   7.1000
     NEMERTEA         NEMERTEA                                                                                                  27.4
                                                    1.5      1      2    2.186   3.3400   1.0320      1                      1     27.4

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                         "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
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DOMINANT INVERTEBRATE TAXA IN BELLINGHAM BAY BENTHOS
MEAN COUNT AND WET WEIGHT PER 0.1M2 BY STATION (SEE A,D)

STA-TION	TAXONOMIC GROUP	TAXON	MEAN COUNT #/0.1M2	REP 1 COUNT	REP 2 COUNT	MEAN WEIGHT G/0.1M2	REP 1 WEIGHT (SEE B)	REP 2 WEIGHT	TOTAL NSP SEE C	MEAN NSP	REP1 NSP	REP2 NSP	W1	W2	DPTH (M)
	SUM		1.5	1	2	2.186	3.3400	1.0320							27.4
	BIVALVIA	AXINOPSIDA SERRICATA	113.0	67	159	1.250	.9140	1.5860	1		1	1		1	27.4
	SUM		113.0	67	159	1.250	.9140	1.5860							27.4
	CUMACEA	EUDORELLA SP.	25.5	13	38	.022	.0110	.0330	1			1			27.4
	SUM		25.5	13	38	.022	.0110	.0330							27.4
	HOLOTHUROIDEA	PENTAMERA POPULIFERA	11.0		22	.752		1.5050	1					1	27.4
	SUM		11.0		22	.752		1.5050							27.4
DOM:			152.0	82	222	11.823	12.3900	11.2560	5		1	2	2	3	27.4
TOT:			244.5	139	350	14.117	14.1294	14.1042	42	29	25	33			27.4
L08	BIVALVIA	AXINOPSIDA SERRICATA	77.5	40	115	1.405	.8710	1.9390	1		1	1	1	1	29.2
		SAXIDOMUS GIGANTEUS	2.0	2	2	4.247	2.9270	5.5680	1				1	1	29.2
	SUM		79.5	42	117	5.652	3.7980	7.5070							29.2
DOM:			79.5	42	117	5.652	3.7980	7.5070	2		1	1	2	2	29.2
TOT:			123.0	82	164	8.205	6.0956	10.3110	29	21	24	18			29.2
L09	POLYCHAETA	HEMIPODUS BOREALIS	1.0	1	1	.163	.0160	.3100	1					1	27.4
		GONIADA BRUNNEA	1.0		2	.141		.2830	1					1	27.4
		LAONICE CIRRATA	.5	1		.167	.3340		1				1		27.4
		PISTA CRISTATA	1.0	2		.572	1.1440		1				1		27.4
	SUM		3.5	4	3	1.043	1.4940	.5930							27.4
	BIVALVIA	NUCULA TENUIS	2.0		4	.018		.0360	1			1			27.4
		AXINOPSIDA SERRICATA	11.5	13	10	.115	.1250	.1050	1		1	1		1	27.4
		MYSELLA TUMIDA	5.5	7	4	.011	.0190	.0030	1		1	1			27.4
		SAXIDOMUS GIGANTEUS	.5	1		.752	1.5040		1				1		27.4
	SUM		19.5	21	18	.896	1.6480	.1440							27.4
	OPHIUROIDEA	AMPHIURIDAE	2.0	1	3	.067	.0030	.1320	1					1	27.4
	SUM		2.0	1	3	.067	.0030	.1320							27.4
DOM:			25.0	26	24	2.007	3.1450	.8650	9		2	3	3	4	27.4

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                         DOMINANT INVERTEBRATE TAXA IN BELLINGHAM BAY BENTHOS
                       MEAN COUNT AND WET WEIGHT PER 0.1M2 BY STATION (SEE A,D)
STA- TAXONOMIC GROUP  TAXON
TION
                                                 MEAN REP 1 REP 2    MEAN    REP 1     REP 2 TOTAL MEAN REP1 REP2 W1 W2 DPTH
                                                COUNT COUNT COUNT  WEIGHT   WEIGHT    WEIGHT   NSP  NSP  NSP  NSP        (M)
                                              #/0.1M2             G/0.1M2  (SEE B)           SEE C
TOT:                                             41.0    42    40   2.100   3.2024     .5570    26   18   17   18        27.4
L10  NEMERTEA        CEREBRATULUS SP.             1.0           2   3.821              7.6430     1                    1 27.4
     SUM                                          1.0           2   3.821              7.6430                            27.4
     POLYCHAETA      TALBERIA GRACILIS           28.0    29    27    .024    .0290     .0200     1              1        27.4
     SUM                                         28.0    29    27    .024    .0290     .0200                             27.4
     BIVALVIA        ACILA CASTRENSIS            23.5    23    24   2.834   1.5480    4.1210     1              1      1 27.4
                     AXINOPSIDA SERRICATA        69.5   119    20    .820   1.4230     .2170     1         1              27.4
     SUM                                         93.0   142    44   3.654   2.9710    4.3380                             27.4
     HOLOTHUROIDEA   PENTAMERA POPULIFERA       362.0   659    65  15.019  11.3300   18.7090     1         1    1  1  1 27.4
     SUM                                        362.0   659    65  15.019  11.3300   18.7090                             27.4
DOM:                                            484.0   830   138  22.520  14.3200   30.7100     5         2    3  1  3 27.4
TOT:                                            620.5  1005   236  25.939  17.1908   34.6864    45   31   34   28        27.4
L11  CNIDARIA        PACHYCERIANTHUS FIMBRIATA    1.5     1     2   2.584    .6820    4.4860     1                    1 25.6
     SUM                                          1.5     1     2   2.584    .6820    4.4960                            25.6
     POLYCHAETA      TALBERIA GRACILIS           30.5    28    33    .017    .0150     .0190     1              1        25.6
                     STERNASPIS SCUTATA           9.0    12     6   1.718   2.0180    1.4180     1                    1 25.6
     SUM                                         39.5    40    39   1.735   2.0330    1.4370                             25.6
     BIVALVIA        ACILA CASTRENSIS            47.0    32    12   7.812  14.2160    1.4090     1         1       1  1 25.6
                     YOLDIA SCISSURATA            1.5     2     1    .856    .1130    1.6000     1                    1 25.6
                     AXINOPSIDA SERRICATA        17.5    31     4    .097    .1790     .0150     1         1              25.6
     SUM                                         66.0   115    17   8.766  14.5080    3.0240                             25.6
     OPHIUROIDEA     AMPHIURIDAE                 22.5    22    23    .457    .5340     .3810     1              1        25.6
     SUM                                         22.5    22    23    .457    .5340     .3810                             25.6
DOM:                                            129.5   178    81  13.542  17.7570    9.3280     7         2    2  1  4 25.6
TOT:                                            234.0   298   170  15.779  21.0638   10.4918    50   35   37   33        25.6

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                                    "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
                                 C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                                    TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                 D: STATION TOTALS REPORTED FOR COMPARISON.
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                                     DOMINANT INVERTEBRATE TAXA IN BELLINGHAM BAY BENTHOS
                                   MEAN COUNT AND WET WEIGHT PER 0.1M2 BY STATION (SEE A,D)

STA-  TAXONOMIC GROUP  TAXON                          MEAN  REP 1  REP 2     MEAN     REP 1     REP 2  TOTAL MEAN REP1 REP2 W1 W2 DPTH
TION                                                 COUNT  COUNT  COUNT   WEIGHT    WEIGHT    WEIGHT    NSP  NSP  NSP  NSP        (M)
                                                   #/0.1M2                G/0.1M2  (SEE B)              SEE C

L12   CNIDARIA         PACHYCERIANTHUS FIMBRIATA        .5      1           1.701    3.4030                1                 1     23.8
        SUM                                             .5      1           1.701    3.4030                                      23.8
      POLYCHAETA       TRAVISIA PUPA                   3.0      1      5    4.306    2.0920    6.5210      1                    1  23.8
        SUM                                            3.0      1      5    4.306    2.0920    6.5210                            23.8
      BIVALVIA         AXINOPSIDA SERRICATA           42.5     26     59     .473     .2930     .6530      1         1    1        23.8
        SUM                                           42.5     26     59     .473     .2930     .6530                            23.8
      OSTRACODA        MYODOCOPA                      25.0     17     33     .017     .0140     .0200      1         1    1        23.8
        SUM                                           25.0     17     33     .017     .0140     .0200                            23.8
      CUMACEA          EUDORELLA SP.                  16.5      7     26     .011     .0050     .0170      1              1        23.8
        SUM                                           16.5      7     26     .011     .0050     .0170                            23.8
      OPHIUROIDEA      AMPHIURIDAE                    64.5     54     75     .968     .7090    1.2270      1         1    1     1  23.8
        SUM                                           64.5     54     75     .968     .7090    1.2270                            23.8
      HOLOTHUROIDEA    MOLPADIA INTERMEDIA              .5      1           8.156   16.3130                1                 1     23.8
        SUM                                             .5      1           8.156   16.3130                                      23.8
DOM:                                                 152.5    107    198   15.633   22.8290    8.4380      7         3    4  2  2  23.8
TOT:                                                 206.0    158    254   18.652   27.5454    9.7592     36   25   25   25        23.8




                                       A: E05 AND E10 NOT PROCESSED.
                                       B: A DOMINANT TAXON IS ONE COMPRISING AT LEAST 10% OF THE TOTAL COUNT
                                          OR WEIGHT IN A REPLICATE. TAXA DOMINANT BY COUNT ARE FLAGGED UNDER
                                          "REP(1 OR 2) NSP"; TAXA DOMINANT BY WEIGHT UNDER "W1" OR "W2".
                                       C: 0.0004 G INDICATES WEIGHT LESS THAN 0.001G. FOR MEAN VALUES THIS
                                          TRACE WEIGHT IS ROUNDED AND REPORTED AS 0.000 G.
                                       D: STATION TOTALS REPORTED FOR COMPARISON.
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